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**‘Lines of Flight’:
Digital Musical Instruments,
Inclusive Music Bands and
Meaningful Engagement in
Music-Making and Learning.**

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Thesis presented for the award of
Doctor of Philosophy (PhD),
National University of Ireland, Cork

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UCC School of Music and Theatre
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Declaration

I, Gráinne McHale, declare that this dissertation is the result of my own work, except as acknowledged by appropriate reference in the text. This is the only publication of this work, and it has not been submitted for any other degree at National University of Ireland, Cork or any other institution.

Gráinne McHale Date.....

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List of Acronyms

CCMEP	Cork City Music Education Partnership
CE	Community Employment
CIT	Cork Institute of Technology
CMEP	Cork Music Education Partnership
CMW	Cork Music Works
CRPD	Convention of the Rights of Persons with Disabilities
CSM	Cork School of Music
DSP	Department of Social Protection
DES	Department of Education and Skills
DMI	Digital Musical Instrument
DTSB	Desktop Soundbeam
EPSEN	Education for Person with Special Educational Needs
ETB	Education and Training Board
HSE	Health Service Executive
ISME	International Society of Music Education
KYMI	Knocknaheeney Youth Music Initiative
MEP	Music Education Partnership
MIDI	Musical Instrument Digital Interface
NCSE	National Council for Special Education
NDA	National Disability Authority
PA	Personal Assistant
RIAM	Royal Irish Academy of Music
SDC	School of the Divine Child
SNA	Special Needs Assistant
SMT	School of Music and Theatre
SMEI	Society for Music Education in Ireland
SEN	Special Educational Needs
SERC	Special Education Review Committee
TMP	Togher Music Project
TMS	Terence MacSwiney

Abstract

In this study I examine the development of three inclusive music bands in Cork city. Derived from Jellison's research on inclusive music education, inclusive music bands involve students with disabilities coming together with typically developing peers to make and learn music that is meaningful (Jellison, 2012). As part of this study, I established three inclusive music bands to address the lack of inclusive music making and learning experiences in Cork city. Each of these bands evolved and adapted in order to be socio-culturally relevant within formal and informal settings: Circles (community education band), Till 4 (secondary school band) and Mish Mash (third level and community band). I integrated Digital Musical Instruments into the three bands, in order to ensure access to music making and learning for band members with profound physical disabilities. Digital Musical Instruments are electronic music devices that facilitate active music making with minimal movement. This is the first study in Ireland to examine the experiences of inclusive music making and learning using Digital Musical Instruments. I propose that the integration of Digital Musical Instruments into inclusive music bands has the potential to further the equality and social justice agenda in music education in Ireland.

In this study, I employed qualitative research methodology, incorporating participatory action research methodology and case study design. In this thesis I reveal the experiences of being involved in an inclusive music band in Cork city. I particularly focus on examining whether the use of this technology enhances meaningful music making and learning experiences for members with disabilities within inclusive environments. To both inform and understand the person

centered and adaptable nature of these inclusive bands, I draw theoretical insights from Sen's Capabilities Approach and Deleuze and Guatarri's Rhizome Theory. Supported by descriptive narrative from research participants and an in-depth examination of literature, I discover the optimum conditions and associated challenges of inclusive music practice in Cork city.

Chapter One

Introduction

In this study I examine the development of three inclusive music bands in Cork city. Derived from Jellison's research on inclusive music education, inclusive music bands involve students with disabilities¹ coming together with typically developing peers² to make and learn music that is meaningful (Jellison, 2012). To address the lack of opportunity for inclusive music making and learning in Cork city, I developed three inclusive music bands that aimed to be socio-culturally relevant within formal and informal settings. The three groups - Circles (community education band), Till 4 (secondary school band) and Mish Mash (third level and community band) - were developed under the umbrella of the community-based organisation SoundOUT.³ Each band integrated a range of Digital Musical Instruments (DMIs). The use of these DMIs aimed to ensure music making and learning was accessible for individuals with profound physical disabilities. DMIs are electronic devices that facilitate active music making with minimal movement.

¹ The use of the term 'people with disabilities' has been recommended by the National Disability Authority (NDA) in Ireland. They stress the importance of placing the person first. For example phrases such as 'the disabled' do not reflect the dignity, equality and individuality of people with disabilities. (People with Disabilities in Ireland, 2000)

² I am using the term 'typically developing peers' because it is the term that is most commonly used in the work by professionals in special education, to describe children who do not have a disability. This reason for using this term has also been cited by Jellison in her book, *Including Everyone: Creating Music Classrooms Where All Children Learn* (2015). The term 'non-disabled peers' is also often used in an Irish context.

³ I established SoundOUT in January 2011. It initially emerged as a key project for the charity Cork Music Works (CMW). CMW provided music making and performance opportunities for adults with disabilities in Cork city. CMW ceased activities in July 2011 and SoundOUT subsequently continued as an independent organisation.

This is the first study in Ireland to examine the experiences of inclusive music making and learning using DMIs. I propose that the integration of DMIs into inclusive music bands has the potential to further the equality and social justice agenda in music education in Ireland. This endeavour to develop more equal and socially just music education practices in Ireland, focuses on the inclusion of marginalised individuals in meaningful music making and learning. Addressing issues of inclusion features strongly within international music education research and development discourse.

I employed qualitative research methodology in this study, incorporating participatory action research methodology and case study design. In this thesis, I explore the experiences of marginalised individuals with disabilities as participants in inclusive music bands in Cork city. In order to contextualise these experiences, I take the perspectives of band members, parents, band facilitators and other stakeholders into consideration. I particularly focus on the experiences of members with profound physical disabilities using DMIs in these bands. I aim to examine whether the use of this technology enhances meaningful engagement in music making and learning. Drawing insights from Csikszentmihalyi's 'flow' theory in his examination of meaningful engagement in music practices (Csikszentmihalyi, 1994, p.222), Steve Dillon suggests that people who are challenged and have the capacity to meet that challenge feel 'flow' (Dillon, 2007, p.46). He argues that people who find 'flow', find it valuable and meaningful. My core objective of each inclusive band was to facilitate 'flow' experiences in order to enhance meaningful engagement for each band member. Supported by descriptive narratives from research participants and an in-depth

examination of literature, I aim to reveal in this study the optimum conditions and challenges of inclusive music practice in Cork city.

This chapter consists of five sections. In the first section, I describe the rationale for this study; I provide an overview of local, national and international educational developments that have influenced the development of the inclusive practice in this study; and I discuss the policies, principles and practices within the fields of community music and inclusive education. The second section describes the exploration phase of the study, which illustrates how the inclusive practice and multidisciplinary theory evolved in tandem. Section three introduces the three inclusive bands that were developed as multiple case studies. In section four, in order to provide personal and professional context, I describe my relevant music making and learning experiences, and reflect on my practice as a community musician and educator. In section five I present an outline of the thesis.

Rationale for this Study

In this section I discuss the international, national and local education developments that have influenced the shaping of my research, in terms of its structures, principles and practices. I begin with a discussion of relevant international and national developments in inclusive education and their impact on the inclusive structure of each of the bands. I continue with an exploration of the community music principles, which have influenced my research and I also outline developments in local and national music education, particularly the national music education initiative Music Generation. Finally, I discuss the

requests I received from local communities for more inclusive music making and learning experiences, which provided impetus to my research practice.

Inclusive Education

The core principle of inclusive education is that all children have the right to be educated together in the same educational environment, regardless of special educational needs (Government of Ireland, 2004). The educational structure promoted by inclusive education has influenced the inclusive model for the music bands in this study, which brings together students with physical and multiple disabilities to make and learn music in the same environment as their typically developing peers. Through this study I aim to contribute to inclusive education development, by providing insight into the experiences of students with disabilities, using DMIs within inclusive music environments. Within the European Union, all countries have legislation promoting inclusive education (Winter and O’Raw, 2010, p.3). From the 1950s to the mid 1990s, children with disabilities were excluded from mainstream school settings in Ireland. In a system of special education, children with disabilities were educated in segregated schools or institutions.⁴ Since the mid 1990s the development of more inclusive policies and practices has enhanced the educational provision for people with disabilities in Ireland (Shevlin and Griffin, 2007) and has instigated

⁴ Policy makers at this time justified this segregation as it enabled the pooling of necessary resources for teaching students with disabilities. They felt it also facilitated on-site access to therapy and specialised services (Winter and O’Raw, 2010).

a move away from special education.⁵ As a result of these developments, students with disabilities are, increasingly, included in mainstream education. The Irish National Council for Special Education's (NCSE) report on the 'Prevalence of Special Education Needs' in Ireland, estimates that one in four students in mainstream schools in Ireland have a special educational need (Banks and McCoy, 2011, p.68). There has been a significant amount of research into inclusive education development in Ireland (Travers and Savage, 2014). Project IRIS (Inclusive Research in Irish Schools), a three-year longitudinal research project, is one of the most in-depth studies of special and inclusive education in Ireland. Within this body of research, no studies focus on examining inclusive music education.

The principle of an inclusive education system in Ireland is widely supported, but achieving it is very challenging. Legislation upholds inclusive practices, but implementation lags far behind (MacGiolla and Phádraig 2007; Shevlin and Rose, 2008, p.427). Many of the provisions that fully support inclusive education, as outlined in the EPSEN act in 2004, were to be introduced over a five-year period, between 2005 and 2010.⁶ In 2008, however, the government suspended implementation due to the economic crisis, as it was

⁵The Special Education Review Committee (SERC)⁵, established by the Department of Education and Skills (DES) in 1991, has played an important role in supporting inclusive education policies and practice over the last three decades to emerge. In the SERC report, the committee advocated for educational environments to have 'as much integration as is appropriate and feasible, and as little segregation as necessary' (Department of Education, 1993, p.22). In 2004 this inclusive agenda was furthered when 'The Education of Persons with Special Educational Needs Act' (EPSEN) was signed into law (Government of Ireland, 2004). This Act focuses on facilitating the education of children within inclusive settings, individual education planning, and the provision of a range of services, including assessments and educational support, where resources are available.

⁶ Core elements of the EPSEN Act, mainly the right to individual education plans, are still not in place. The NDA of Ireland and other key advocacy groups are currently campaigning for renewed implementation (Inclusion Ireland, 2013).

deemed resources were unavailable. This delay is impacting negatively on children with disabilities in Ireland and limiting their educational rights (Rose et al., 2012, p.111). The failure to implement the recommendations of the report is also in opposition to the principles of the United Nations (UN) Convention of the Rights of Persons with Disabilities (CRPD). Under Article 24 of the CPRD, the government is obliged to ensure that children with a disability are not excluded from the general education system on the basis of disability. Ireland signed the CPRD in March 2007 but remains one of the few Member States of the EU yet to ratify the Convention. Ratification is expected in 2016 (Inclusion Ireland, 2013).

Community Music

Community music research and practice have strongly influenced the inclusive aims in this study. Community music is based on the idea that everyone has the right and ability to make, create, and enjoy their own music.⁷ A balance of personal, social and musical growth underpinned by creativity, democracy and empowerment, feature strongly in community music practice (Higgins, 2007). Higgins suggests that community music is not a specific form of music, but a specific attitude to music (Higgins, 2008, p.327). Grant suggests that community music is distinguishable from other forms of music making by its equal opportunity agenda (Grant, 2006). The establishment, in 1984, of the

⁷ According to Higgins, a leading practitioner and researcher in the field, community music emerged in the United Kingdom (UK) as a sub-strand of the community arts movement, during the 1960s (Higgins, 2008, p.23). The community arts movement involved artists collaborating with community groups, marginalised from mainstream arts activities. According to Grant (2006) community music as a recognised practice didn't emerge in Ireland until the mid 1990s, where its ideologies and pedagogies were overlapping with music education.

International Society of Music education's (ISME) commission on Community Music Activity, and the foundation, in 2008, of the *International Journal for Community Music (IJCM)*, have provided an international platform for researchers and practitioners to share, examine and theorise community music practice. Significant developments for community music in Ireland include the development in 1997, of a twelve-week undergraduate module, as part of the music degree programme at Cork Institute of Technology (CIT) Cork School of Music (CSM), and the establishment of the Masters degree programme in community music at the University of Limerick in 1999. These courses led to an increase of community music practice and research in Ireland.

The most substantial academic research on community music in Ireland is Evelyn Grant's doctoral thesis 'A Community Music Approach to Social Inclusion in Music Education'. In her study, Grant identifies 'an inequality of access to music making and learning opportunities' in Ireland (Grant, 2006, p.106). She advocates for the integration of community music principles and practices into music education in Ireland, in order to provide more accessible and inclusive opportunities and outcomes for marginalised individuals. In her work with students as part of CMW, Grant introduced the use of DMIs to ensure access to active music making for young people with disabilities.⁸ Grant's study inspired me to embed the community principles of inclusion, empowerment, and celebration of diversity in my own work. Her research was also a strong catalyst for my use of DMIs to enhance meaningful music making and learning.

⁸ Cork Music Works (CMW) was established in 2002 by Dr Evelyn Grant and Judith Brereton in order to provide music making and performance opportunities for people with disabilities in Cork city. It was also a case study in Grant's PhD research.

National Music Education Developments

In the last decade, there have been several notable developments, which have addressed the inequality of opportunity in music education in Ireland. The most notable of these is the establishment, in 2010, of Music Generation.⁹ Music Generation emerged from a range of music education reports¹⁰ that advocated for locally provisioned, high quality music education and performance opportunities for young people throughout the country, regardless of social, economic and geographic situations. The Department of Education and Skills (DES) and the Department of Arts, Sport and Tourism, jointly commissioned a feasibility study to examine how a publicly funded system of local and accessible music education services could be provided in Ireland. After a series of pilot studies and reports, a collaborative partnership model was deemed ‘a workable and replicable framework for development of music education services on a wider scale throughout Ireland’ (Music Network, 2009).

With 7 million euro of philanthropic funding from the Irish rock band U2, the Ireland Funds, and a range of music education supporters, Music Generation rolled out the recommendations of these reports on a phased basis between 2010 and 2015 in Ireland.¹¹ This national music education programme has developed local music services, by supporting the evolution of a range of Music Education

⁹ Music Generation was established in 2010 as a national music education programme, initiated by Music Network and co-funded by the rock band U2, The Ireland Funds, The DES and local Music Education Partnerships (MEPs). This programme provides music tuition for children and young people through locally provided services. It is a five-year programme (2010-2015), which is provided locally within a national framework. (www.musicgeneration.ie, Accessed 04.05.2015).

¹⁰ PIANO report, (PIANO review Group, 1996); MEND report (Heneghan, 2001); A National System of Local Music Education Services (Music Network, 2003)

¹¹ In 2015 U2 donated a further 2 million to Music Generation.

Partnerships (MEPs) in various counties throughout the country. Each county-based MEP brings together local stakeholders in music education practice and policy, to support the development of sustainable models for local provision of music education (instrumental and vocal tuition).¹² Music Generation funding was allocated to each MEP on a competitive basis. The funds were allocated to 10 MEPs throughout the country (Mayo, Cork city, Laois, Louth, Limerick City, Dublin South, Wicklow, Offaly, Sligo and Clare). The Music Generation initiative has been a strong instigator for this study, as it promotes the development of more inclusive practice in music education.

Local Music Education Developments

On a local level, Cork city provides a very supportive environment for an engagement with issues of social inclusion in music education. There is a strong commitment from local community music organisations and education agencies, such as the Cork Education and Training Board (ETB), to enhance inclusive and meaningful music making experiences in the city. There have been key research initiatives and partnership developments that fostered a local movement for social inclusion in music education in Cork city.¹³ Maria Minguella, on behalf of the Cork city Council, conducted a review of community music organisations in Cork city, which advocated for the ‘Use of Music as a Tool for Social Inclusion’ (Minguella, 2009). The establishment of the Cork City Music Education

¹² The musical instruments and genres are being taught throughout the country, often depends on the availability and local expertise of music educators.

¹³ Evelyn Grant’s PhD study on social inclusion in music education involved two case studies in Cork city – CMW and The Flute ensemble at St. Brendan’s Girls National School, The Glen. (Grant, 2006).

Partnership (CCMEP) in 2011 brought researchers, practitioners, community organisations and other stakeholders together, in order to bring social inclusion to the forefront of music education development in Cork city. In 2012 the CCMEP was successful in a funding application to the national office of Music Generation, to support the development of a diverse and inclusive music education initiative known as Music Generation Cork City (MGCC).¹⁴ MGCC developed a range of music education projects in partnership with community based music education organisations across the city. Developing provision in areas of educational disadvantage in Cork city was prioritised. SoundOUT is a key partner of MGCC. The Circles and the Till 4 band in this study were funded by MGCC. In the context of these developments there has been minimal research and practice on inclusive music education.

Requests for Inclusive Music Making and Learning

I developed the three inclusive bands in this study in response to local requests for more inclusive music making and learning opportunities, particularly for young people with profound physical disabilities. I received a specific request from Cillian McSweeney, a young person with profound cerebral palsy, to help him achieve his dream of making music in a band. He emphasised his exclusion from existing music programmes in the city. Progression in music making and learning was an important ambition for Cillian. He wanted to progress to a mainstream music band, rather than be involved in the segregated music band

¹⁴ The Cork city MEP involves stakeholders from University College Cork (UCC), CIT, Cork ETB, Cork City Arts Council, and community based music organisations including SoundOUT, Barrack Street Band, and Cork Academy of Music.

that existed in Enable Ireland disability services.¹⁵ Cillian's request was presented to me via a typed letter he composed with support from his Personal Assistant (PA) Brian. There were specific and progressive requests in this letter. He wanted to make music, write a song and join a band. He also wanted to achieve a qualification in music with the ultimate aim of working in the music industry. This request was the strongest catalyst for me to develop the exploratory phase of this study, which is described in the following section.

The Exploratory Phase of this Study: The Pilot Band

Subsequent to receiving Cillian's request, I began to explore a range of partnerships to support the development of an inclusive band. Partnerships emerged with the Knocknaheeney Youth Music Initiative (KYMI)¹⁶, CMW¹⁷, Cillian's parents and Enable Ireland disability services. The inclusive band brought Cillian together with seven members from the KYMI. This band emerged as the pilot band, and led eventually to the formation of the three inclusive bands that are at the centre of my research.

¹⁵ Cillian attended Enable Ireland five days per week at this time. Enable Ireland Cork provides free services to children and adults with physical disabilities. Enable Ireland's mission statement is to work in partnership with those who use the service to achieve maximum independence, choice and inclusion in their communities (Enable Ireland, 2015).

¹⁶ The KYMI aimed to train young people in practical and theoretical music skills to provide support to individuals and increase their potential to access further education and the labour market. (YooCo Enterprises, 2012).

¹⁷ CMW provided a range of accessible musical instruments including the DMIs Soundbeam and the Magic Flute for this study.



Figure 1: Pilot Band

The pilot band met at the site of KYMI, on a weekly basis, between January 2011 and June 2012, to compose and perform new music.¹⁸ Cillian's request for inclusive music making and learning was underpinned by his ambition for progressive and meaningful engagement with music. He no longer wanted to be associated with the 'wheelchair brigade'¹⁹ and he desired to make music independently.

This pilot band provided me with a space to explore the use of DMIs within inclusive settings. As conventional musical instruments are not accessible for Cillian, I explored models of good practice and associated theory that focused on the use of DMIs for creative expression and music performance (Brown and Dillon, 2007). Cillian used the DMI, Soundbeam, to make music with the band. Soundbeam is a DMI that is composed of movement sensors and pressure

¹⁸The KYMI lost their funding in December 2011 resulting in the finishing up of the inclusive band under the structure of KYMI. However the group continued to meet informally outside of KYMI until June 2012.

¹⁹Cillian referred to group activities in his day service centre as the 'wheelchair brigade', as he felt the only thing he had in common with participants was the fact they were also in a wheelchair.

switches that enable active music making with limited movement. Cillian triggered music with a pressure sensor, using head movements (See Figure 2).

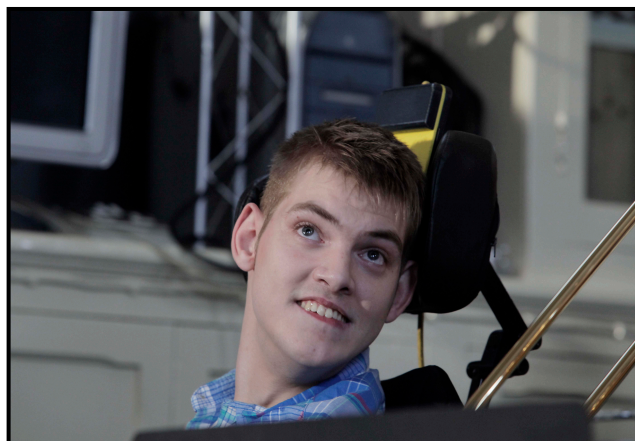


Figure 2: SoundOUT student Cillian using a pressure sensor

I also began to identify the relevant training I would need to facilitate inclusive bands that integrated DMIs. The central role of partnerships in this process quickly became apparent, as it was necessary to have a wide range of support for this inclusive band. This support included accessing equipment, venue, transport and care support for Cillian.

This exploratory phase led me to an in-depth examination of inclusive music education research and practice.²⁰ Elements of inclusive music education research, such as the implementation of a Universal Design for Learning framework²¹, have strongly influenced the processes I employed with each of the bands in this study. However research on inclusive music education practices falls short of research in the wider area of inclusive education (Jellison and Draper, 2015), and in order to further guide and develop my understanding of the

²⁰ The majority of inclusive music education research has taken place and been reviewed in the United States (Jellison, 2015).

²¹ Universal Design for Learning is a framework that promotes flexible teaching principles, which enable universal access to meaningful music learning for diverse learners within the one classroom (Jellison, 2012, p.69).

evolution of the structure and practices of these bands, I looked to multidisciplinary theories. These theories include the Capabilities Approach (Sen, 1999), the Rhizome Theory (Deleuze and Guatarri, 1987) and the Ecological Systems Theory (Bronfenbrenner, 1994).

The Capabilities Approach was developed by Amartya Sen in the 1980s as an alternative way to assess well-being, in order to enhance human development (Sen, 1999). ‘Capabilities’ refer to what an individual has the freedom to be able to do, and desires to be and do. Sen’s Capabilities Approach provided me with a useful perspective for understanding the person-centered approach taken in the band. This approach facilitated meaningful engagement as it took into consideration each individual’s values and ambitions: what they desired to be and do within a music making and learning context.

The Rhizome Theory was developed by French Philosophers Deleuze and Guatarri as an alternative way to understand the acquisition of knowledge. They advocated for the replacement of the often-used tree structure model of knowledge with a Rhizome²², which grows or moves in messy and unpredictable ways. A rhizome survives on continuously evolving connections. Early in my research work with the inclusive bands, I recognised that multiple partnerships were necessary to enable meaningful progression for each band member, within and beyond the inclusive bands. These progression routes are referred to as ‘lines of flight’ in the Rhizome Theory.²³ The adaptable nature of the Rhizome

²² A rhizome is plant that is ‘a continuously growing horizontal underground stem which puts out lateral shoots and adventitious roots at intervals’ (Oxford Dictionary Online, 2014).

²³ According to Deleuze and Guattari, the rhizomatic approach to learning consists of various ‘lines of flight’, which change and adapt to their conditions (Deleuze and Guatarri, 1987, p.9).

Theory provides insight into the flexible structure that was used to facilitate multiple partnerships and progression routes in each of the three inclusive music bands.

Bronfenbrenner's Model of Social Ecology provides a framework to examine and contextualise the multiple partnerships that led to the evolution of these inclusive bands. Bronfenbrenner's Ecological Systems Theory emerged in the 1970s as a new perspective on child development. This theory emphasised the role of the environment and society on development (Bronfenbrenner, 1974, 1976, 1977).²⁴ Bronfenbrenner explored how development occurs within a multitude of different, yet nested and related systems (Bronfenbrenner, 1994, p.37). This model enables an examination of the inclusive bands on a macro and micro level.

Exploring these critical theories within an inclusive music education context helped me both interpret and cultivate the necessary structures and processes for the pilot inclusive music band. This led me to develop the three inclusive music bands: Circles, Till 4 and Mish Mash.

Introduction to the Inclusive Music Bands in this Study

This section provides an introduction to the three inclusive music bands: Circles, Till4 and Mish Mash. The comprehensive introduction to these bands provides a context for my discussion of inclusive music education literature in Chapter 2,

²⁴ Based upon Lewin's theory of psychological fields, Bronfenbrenner professes that the ecological system in which we exist is composed of five socially arranged subsystems that influence and support personal growth (Bronfenbrenner, 1977; Lewin, 1917, 1931, 1935).

the use of DMIs in music education presented in Chapter 3 and the critical theories explored in Chapter 4.

In September 2012, I established the first inclusive band, Circles, in collaboration with the Togher Music Project (TMP) and Enable Ireland disability services. This was funded by the 'Arts in Context' award from Cork City Arts Council between September 2012 and December 2012.



Figure 3: The Circles Band

The TMP is a community employment scheme²⁵ that provides music education opportunities for adults at the Togher community centre on the south side of Cork city. This inclusive band was extracurricular to the music training offered at TMP and membership was voluntary. Six of the ten TMP participants joined Circles to gain experience in creating and performing in a band. Cillian McSweeney also became a member of Circles. All members were aged between 20 and 30 years. The music composed and performed by the band was mostly

²⁵ A Community Employment (CE) scheme is designed to help people who are long-term unemployed and other disadvantaged people to get back to work by offering part-time and temporary placements in jobs based within local communities. Participants can take up other part-time work during their placement. After the placement, participants are encouraged to seek permanent part-time and full-time jobs elsewhere based on the experience and new skills they have gained while in a Community Employment scheme. The Community Employment programme is administered by the Department of Social Protection. (Department of Social Protection, 2013)

original music in a pop or rock style. The instruments used by Circles included drums, keyboard, acoustic guitar, electric guitar, bass guitar and Soundbeam. Members of the band also sang. I facilitated band rehearsals on a weekly basis between September and December 2012. Cillian's parents provided transport and personal care support for Cillian at these weekly rehearsals. TMP participant Graham McCarthy volunteered to help with these rehearsals in order to gain experience in band facilitation and in using DMIs for creative music making. In January 2013 Circles received funding from MGCC, which enabled Graham to take over the facilitation of the band. Circles has performed in a wide range of diverse venues throughout Cork city, including Cork City Hall, Cork Opera House, University College Cork, City Limits nightclub and several local schools, including Cillian's primary school, School of the Divine Child (SDC).

In October 2012, I established Till 4 in collaboration with Terence MacSwiney (TMS) Community College²⁶, School of the Divine Child²⁷ and Music Generation Cork City (MGCC).

²⁶ TMS is a secondary school in Knocknaheeny on the North side of Cork city. TMS is a school that falls within an area of Cork city that is recognised as educationally and economically disadvantaged. Knocknaheeny is currently designated as a RAPID (Revitalising Areas by Planning Investment and Development) area. The school has 193 enrolled post-primary students. 40 students were receiving individual and small group tuition as part of the SoundOUT inclusive music education programme.

²⁷ SDC is a small SEN school in the south side of Cork city that caters for the educational needs of young people with disabilities, both primary and secondary school age. There were approximately 30 students attending SDC in 2012, 11 of which were receiving instrumental tuition on a weekly basis from SoundOUT since September 2012.



Figure 4: Till 4 Band

Till 4 is a secondary school inclusive music band that involves eight teenagers; four band members are students with physical and multiple disabilities from SDC and four are mainstream students from TMS community college. The band rehearsed weekly at TMS, as an extracurricular activity between October 2012 and May 2013. Students from SDC travelled via taxi every Wednesday for rehearsals. I facilitated this band with two other music facilitators, Rachel Healy²⁸ and Rory McGovern²⁹. In September 2013, Till 4 rehearsals recommenced, with Jessica Cawley³⁰ replacing Rachel as facilitator until June 2014. The Till 4 members chose to learn and perform cover versions of popular songs. They also collaboratively wrote and performed original music. Members of the band sang and instrumentation included drums, keyboard, bass guitar, acoustic guitar, percussion, DMIs including Soundbeam, the Magic Flute,³¹ iPads³² and a range of MIDI (Musical Instrument Digital Interface) controllers. The band performed in a range of venues in Cork city, including the

²⁸ Rachel Healy is a community musician whose area of speciality is drumming and singing.

²⁹ Rory is a community musician who works with youth groups throughout Cork city. His area of expertise is in pop/rock bands.

³⁰ Jessica is a music educator and researcher interested in informal learning processes. Her expertise is in traditional Irish music and brass instruments.

³¹ The Magic Flute is an accessible wind synthesiser. It is placed on a stand and can be played without the use of hands by blowing into a mouthpiece and moving up and down using small head movements. (Dillon, 2014).

³² The iPad applications Garageband and Korg's iKaossilator were mainly used for performance and composition purposes.

Cork Opera House, local schools and Cork City Hall.

Mish Mash was established in November 2012 and comprised of six adults with multiple disabilities, some with physical limitations. The members were drawn from various disability services³³ in Cork city and one student from the School of Music and Theatre (SMT) at UCC.



Figure 5: Mish Mash Band

Mish Mash was established as part of the FUAIM Music and Community initiative at UCC SMT.³⁴ FUAIM Music and Community is a community engagement initiative, that aims to inspire and build capacity for creative and mutually beneficial relationships to develop between local communities in Cork city and UCC SMT. Mish Mash has rehearsed weekly at the SMT since the band was formed in November 2012. The band created original music using a wide range of DMIs, including Soundbeam, the Magic Flute, iPad, digital keyboards and the Roland Wx5 Wind Synthesiser. I was the band facilitator for Mish Mash from November 2012 to June 2014. Graham McCarthy (Circles facilitator) joined Mish Mash as a co-facilitator in January 2013. Mish Mash performed in a

³³ Mish Mash members with disabilities attend disability service centres in Cork city during the daytime. These services include Enable Ireland disability services, the COPE Foundation and the Brothers of Charity.

³⁴ I coordinated FUAIM Music and Community from September 2011 – July 2014 as part of my PhD scholarship at UCC SMT.

wide range of venues in Cork city, including UCC, CIT CSM and City Limits nightclub.

These three inclusive bands were formed with the core principles of inclusion, empowerment, democracy and celebration of diversity. However, each band was unique and adapted to its environment, resulting in diverse facilitation methods, resources and visions. These bands evolved from partnerships I developed with individuals, organisations and band facilitators, many emerging from my work as a community musician and educator in Cork city since 2004. In the following paragraphs, I describe the personal and professional contexts from which this practice has been developed.

Personal and Professional Context

My music experiences as a child had a significant influence on my practice as a music educator and community musician. I come from a small village in the north west of Ireland, where I attended a small primary school and secondary school.³⁵ Music making and learning was a very prominent activity in my primary school, where there were students with diverse abilities, including students with disabilities, within one classroom. The inclusive ethos that underpinned all activities in the school empowered each student to follow an educational path that focused on their strengths and values. Even before the development of inclusive education policies in Ireland, the attitudes of the principal and teachers encouraged all students to follow their individual ‘lines of

³⁵ There were approximately 40 students in Creevagh Primary School and approximately 300 students in Lacken Cross Secondary School and 500 pupils in St. Mary’s Secondary School, Ballina, Co. Mayo.

flight’.

Throughout my school-going years, I was also very involved in music making in my local community. I played the organ and sang at my local church and played traditional Irish music at local nursing homes. I also participated annually in local musicals. These activities provided a rich tapestry of music-making experiences involving friends and family that were interwoven with my everyday life. In my fourth year in Secondary School (2001) I had the opportunity to ‘shadow’ Mary Curran, the ‘Musician in Residence’ at Mayo County Council’s Arts Office. Mary facilitated regular music sessions with marginalised groups, including young people with disabilities. I was inspired by Mary’s informal and accessible approach to using music for creative expression. This experience ignited a passion in me for inclusive music making, which led me to study music at UCC in 2002. As an undergraduate music student at UCC, I engaged in music theory and performance coursework from a wide range of disciplines and genres.

In my final year I focused my interest on music composition using interactive multi-media technologies. Outside of my coursework I volunteered with CMW. CMW, established in 2002 by Judith Brereton and Dr Evelyn Grant, was a charity that facilitated community music projects for adults with disabilities throughout Cork city. The project served as a case study in Dr Grant’s doctoral research at UCC, which explored issues of social inclusion in music education in Ireland. I was involved with CMW on a voluntary basis between 2004 and 2006. During this time I was introduced to the DMI known as Soundbeam, which CMW used to enable musicians with physical disabilities to

perform music independently in a range of CMW public performances. CMW provided me with the opportunity and support to use my musical and technical skills to develop new projects and performances with CMW participants.

In 2006 I developed an inclusive music project with CMW called ‘Somewhere over the Rainbow’ as part of my final year music studies at UCC. It brought together four undergraduate students from UCC SMT and four young adults from CMW. The group worked together over four weeks to collaboratively create visuals, movements and music for a multi-media performance using Soundbeam technology. The project was a catalyst for my interest in the use of technology for creative arts practice and led me to undertake an MA in Community Music at the University of York. In 2008, I returned to Cork to become project coordinator at CMW, a position I held until 2011.³⁶

In order to address the gap in the provision of inclusive music education and performance opportunities for young people in Cork city, I established SoundOUT in 2011.³⁷ The SoundOUT initiative currently provides music lessons and inclusive band activities for approximately 300 young people in Cork city, some of whom have physical and multiple learning difficulties. These programmes take place in community and school settings in Cork city.³⁸ All music tuition and band activities integrate a range of DMIs, where appropriate, in order to ensure that music making is accessible and meaningful to all

³⁶ CMW ceased community music activities in 2011.

³⁷ CMW provided support and equipment to SoundOUT to develop the inclusive bands in this study.

³⁸ SoundOUT provides music education services to one mainstream primary school, one Special Educational Needs (SEN) school and one mainstream secondary school. It also facilitates four community music projects.

participants. SoundOUT acts as an umbrella organisation for the three inclusive bands that were developed as part of this study.

SoundOUT has provided a platform for me to develop relationships with practitioners and policy makers within the area of arts, disability and education. These connections enable me to share work and engage in regular critical discourse with, and receive feedback and peer validation from, ‘critical friends’. (McNiff et al., 1996, p.24). These critical friends emerged within a variety of contexts. I engaged with policy makers through my board membership with various local and national networks, including the Arts and Disability Network, Society for Music Education in Ireland (SMEI) and MEP Cork city. Lecturing in a variety of departments at UCC³⁹ and becoming the coordinator of the FUAIM Music and Community Initiative at UCC SMT, has also provided me with opportunities to engage with critical friends within diverse contexts. These groups, including students and staff at UCC and members of local community organisations, have brought a wide range of perspectives to my research.

Outline of Thesis

The thesis is composed of ten chapters. In Chapter 1, I introduce core concepts in this study and provide an overview of the personal and professional contexts from which it emerged. In Chapter 2, I present policies, principles and practices that relate to the development of the field of inclusive music education and I

³⁹ I have lectured part-time in various departments at UCC in the area of Music and Community (SMT), Creative Art, Culture and Inclusion (Disability Studies), and Expressive Arts (Applied Social Studies). As part of the UCC Scholarship I also co-coordinated the FUAIM Music and Community initiative (2011-2015).

explore research that deals with issues of equality and social justice within the field of sociology of music education. In Chapter 3, I outline developments in the use of DMIs for meaningful music making and learning, and I describe the use of DMIs in each of the three bands introduced above. I continue in Chapter 4 by drawing inspiration from a range of interdisciplinary theories that both inform and contextualise the development of the inclusive bands in this study. These theories include Bronfenbrenner's Model of Social Ecology, Deleuze and Guattari's Rhizome Theory and Sen's Capabilities Approach. In Chapter 5, I detail the participatory action research methodology used to capture the experiences of young people with disabilities using DMIs to engage in meaningful inclusive music making and learning. In Chapter 6, I provide an ethnographic description of the specific structure and pedagogic process that evolved in each inclusive band. In Chapter 7, I map the partnerships that were established when developing each band in this study, by using Bronfenbrenner's Model of Social Ecology. In Chapters 8, 9 and 10, I present the findings relating to the development of the inclusive bands and the experiences of members with disabilities using DMIs to access meaningful experiences in each of the bands. My analysis of these experiences illustrates the efficacy of inclusive music bands that integrate DMIs, in enhancing meaningful engagement in music making and learning in Cork city. I also outline the conditions and associated challenges that facilitated the development of each of the three inclusive music bands.

Chapter Two

Inclusive Music Education

Introduction

In this chapter, I discuss inclusive music education principles and practices that support the development of the structure and pedagogic process of the three inclusive bands in this study: Circles, Till 4 and Mish Mash. The practical and theoretical examinations that I undertook during the exploratory phase of this study led me to consider inclusive music education in depth. As inclusive music education research and practice is in its infancy in Ireland, this study gains significant theoretical and practical insights from international models of inclusive practice.

Since the International Society for Music Education (ISME) developed a commission for Music in Special Education and Music Therapy⁴⁰ in 1974, there has been an increasing amount of literature and debate on enhancing meaningful engagement for learners with disabilities in inclusive music education settings. The recent development of ‘A Special Research Interest Group of the National Association for Music Education (NAfME)’ in the United States provides a platform for international music educators and researchers to share strategies relating to the inclusion of children with disabilities in all areas of music education. This special interest group promotes inclusive music education ‘that enables all children to experience music in authentic and meaningful ways’

⁴⁰ This commission was previously known as Music in Special Education, Music Therapy and Music and Medicine.

(Exceptionalities SRIG, 2015). The inclusive principles and practices developed in the context of inclusive music education discourse resonate strongly with the egalitarian ethos of my own research, and have inspired me to develop context specific music programmes that are accessible to all learners in Cork city.

This chapter is composed of two sections. In the first section, I discuss international research within the field inclusive music education in order to provide an understanding of the principles embedded in each of the three inclusive bands in this study. In particular, I focus on research that examines issues of collaboration, individual adaptations and universal strategies, grounded in the Universal Design for Learning framework, which support inclusive music practice (CAST, 2015). I also examine research that explores the benefits and challenges of inclusive music education. In part two of the chapter, I introduce literature that focuses on issues of social justice and democracy in music education, and I present research on internal and external sustainability of inclusive music programmes and reflective practice. Examined from an inclusive music education perspective, this literature provides further theoretical context for this study.

Inclusive Music Education

In this section, I begin with an introduction to the core principles of inclusive music education. Judith Jellison is one of the most prolific researchers in the area of facilitating inclusion for children with disabilities in music education. Jellison describes inclusive music programmes as ‘learning environments where students both with and without disabilities participate successfully and happily in

meaningful music experiences' (Jellison, 2012). In her book *Including Everyone* she presents four guiding principles for the development of inclusive music practice. Firstly, she suggests that meaningful experiences in music education can be enhanced when students engage in 'culturally normative music experiences' and 'socially valued roles' within a diverse population as part of daily routine (Jellison, 2015, p.51). Secondly, she proposes that facilitating 'regular, positive and reciprocal interactions' with 'same-age peers in inclusive music environments' is central to developing inclusive music programmes (*ibid*). Thirdly, Jellison advocates for the provision of a safe environment, where children have freedom to develop their autonomy and self-determination, as well as becoming actively involved in decision-making relating to their musical development. Finally, she highlights the importance of designing, implementing and evaluating an individualised music education programme, which involves collaboration and coordinated efforts among parents or guardians, professionals, and other significant individuals in the music student's life (Jellison, 2015, p.51). In combination with these principles, Jellison emphasises the importance of 'transfer learning' within inclusive music practice. According to Jellison, transfer learning occurs when students learn skills thoroughly and learn how to apply them in diverse and multiple contexts (Jellison, 2015, p.783). Jellison's four principles and her concept of transfer learning were influential in the development of the three inclusive music bands in this study.

In the following section, I provide further theoretical context to this study, through an introduction to the evolving body of literature that has emerged over the past three decades, in response to the increase of students with disabilities

participating in mainstream music classes worldwide (Adamek and Darrow, 2005). A number of literature reviews were conducted in music education and music therapy contexts, which include research relating to the inclusion of students with disabilities in meaningful music making and learning. However, no specific review of research within inclusive music settings existed until 2015, when Jellison and Draper published the article ‘Research in Inclusive School settings: 1975- 2013’⁴¹ (Jellison and Draper, 2015). Jellison and Draper’s review focuses on research that emerged in the US between 1975 and 2013.⁴² Twenty-two articles that examine inclusive music education practices were identified in the review. Of these, eighteen were published in music therapy journals. This statistic illustrates that, in general, relatively little has been written about students with disabilities in music education literature.

Although music education and music therapy practice overlap significantly, they have diverse goals. Music education primarily concerns musical development in areas such as the development of skills and appreciation of music, whereas music therapy uses music to achieve non-musical goals in social, physical and emotional realms (Adamek and Darrow, 2005). The primary differences between music educators who work with students with disabilities and music therapists are discernible by the type of goals targeted by the respective disciplines (Adamek and Darrow, 2012). Some scholars believe that music education and music therapy practitioners can complement each other

⁴¹ This specifically refers to children with disabilities and their typically developing peers in inclusive school settings (Jellison and Draper, 2015).

⁴² Currently, there are limited studies, on the inclusion of students with disabilities in music education, outside of the US (Barrett et al., 2013; Zimmerman and Nilsson, 2015).

when engaging young people with disabilities in active music making within inclusive environments (Bruhn, 2000; Ockelford, 2008). Jellison emphasises that music therapy should not be a replacement for music education (Jellison, 2015, p.93). Ockelford also argues that music therapy and inclusive music education opportunities for students with disabilities should not be confused: ‘therapy should not be used as a substitute for education and vice versa’ (Ockelford, 2012, p.8). Jellison calls for more research to take place within inclusive music education settings, using language that more closely reflects education policies and practices (Jellison, 2012, p.336).

In 2007, Jellison and Taylor conducted a review of music education research that examined attitudes towards the inclusion of students with disabilities in music making and learning (Jellison and Taylor, 2007). While a positive attitude towards the inclusion of students with disabilities was identified in these studies, music educators surveyed highlighted difficulties relating to the availability of resources, including available preparation time (Jellison and Taylor, 2007, p.10). The most recent review of music educator’s attitudes to the inclusion of students with disabilities in mainstream music classes was undertaken by Van Weelden and Whipple in 2014 (VanWeelden and Whipple, 2014). This review highlights a significant increase in positive perceptions towards the inclusion of students with disabilities amongst music educators in the US, in comparison to an earlier review undertaken by Gfellar et al. in 1990 (Gfellar et al, 1990). Van Weelden and Whipple report that 62% of music educators were comfortable adapting their music education curriculum to include students with disabilities (VanWeelden and Whipple, 2014). Addressing the 38%

of music educators who do not feel comfortable adapting their music practice, Jellison asks, ‘What can be done to help teachers meet the educational needs of children with disabilities in inclusive music classrooms and rehearsals?’ (Jellison, 2015).

Adaptations and Strategies for Inclusive Music Practice

Adamek and Darrow’s research also addresses Jellison’s question by advocating for a re-examination of accepted instructional strategies for teachers, which enable them to accommodate student diversity (Adamek and Darrow, 2012, p.93). In 2005, they conducted research that examined adaptations and strategies for the effective inclusion of children with disabilities in music education worldwide. These adaptations refer to adjustments to the music classroom environment: the materials used in the music classroom or music instruction (Adamek and Darrow, 2005). Adamek and Darrow’s research reveals that adapting music education practice also had a positive effect upon typically developing students (Adamek and Darrow, 2005, p.88). In 2010, Carol McDowell published ‘An Adaption Tool Kit for Teaching Music’ (McDowell, 2010). The article discusses a variety of methods and introduces an array of ‘tools’ which can be used to adapt a music classroom in order to effectively include all students, including students with disabilities. McDowell’s and Adamek and Darrow’s publications aim to inspire music educators to facilitate successful and inclusive learning environments for all students. More recently, publications, including Jellison’s book *Including Everyone* (2015) and McCord and Vanderlinde Blair’s book *Exceptional Music Pedagogy for Children with*

Exceptionalities (2015) provide critical, practical and inspiring insight into inclusive music practice worldwide (Vanderlinde Blair & McCord, 2015; Jellison, 2015).

Universal Design for Inclusive Music Learning

Ockelford, Jellison, and other researchers such as Darrow and Adamek, argue that it is necessary to develop pedagogical practices that move beyond individual adaptations for children with disabilities, towards ‘universal’ solutions that are suitable for all students (Ockelford, 2012, p.9; Jellison, 2012, p.69). In this section I describe Universal Design for Learning, a universally accessible approach to learning, which is a prominent feature of inclusive music education practice and literature worldwide.

Universal Design for learning is a framework that promotes flexible teaching strategies, which enable universal access to meaningful music learning for diverse learners within the one classroom (Rose and Meyer, 2006). The concept of Universal Design emerged from the field of architecture and was coined by architect Ronald Mace in the mid-1980s. It refers to the designing of products, including buildings, to be aesthetic and usable to the greatest extent possible by everyone, regardless of age, ability or social status.⁴³ The concept of Universal Design has subsequently inspired educationalists worldwide and is the foundation for a universal approach to music education (Jellison, 2015).

Universal Design for Learning facilitates educators in finding innovative ways to make curriculum accessible and appropriate for diverse learners,

⁴³ More information available at: www.universaldesign.ie (Accessed 15 June 2013).

including students with disabilities (Burgstahler, 2007, 2007a). It can often be referred to as ‘inclusive design’ or ‘design for all’. It offers new flexible and responsive ways to develop music education practice and policy. It promotes flexible options for how information is presented, how students respond to it, and how students engage generally in learning. Developments in new educational technologies and media have been inspired by principles of Universal Design for Learning.

Rose and Meyer present three principles of Universal Design for Learning. The first principle advocates for ‘multiple and flexible methods of presentation that give learners various ways to acquire information and knowledge’ (Rose and Meyer, 2006, p.ix). The second principle suggests that ‘multiple, flexible methods of expression and apprenticeship offer students alternatives for demonstrating what they know’ (*ibid*). The final principle promotes ‘flexible options for engagement, in order to help learners get interested, be challenged, and stay motivated’ (*ibid*). Jellison emphasises that, when these three principles of Universal Design for Learning are applied within inclusive music education settings, all students are engaged in meaningful music making and learning. The creation of flexible and multiple entry points into participation in music education ensures access for diverse abilities. It also provides opportunities for music educators to implement appropriate learning goals and assess the musical development of all students (Jellison, 2015). The application of these principles of Universal Design, within an inclusive music education setting, avoids the over specialisation of individual adaptations or exclusion of students with disabilities from classroom activities (*ibid*). Universal Design for Learning operates on the

premise that diverse learners, including students with disabilities, can be accommodated without exclusion or without compromising academic standards (Bowe, 2000). These principles guide the inclusive practices within this study.⁴⁴

Inclusive Music Development

All students have the capacity for music learning and development (Ockelford, 2008; Ockelford and Welch, 2012; Adamek and Darrow, 2005, 2012). The focus on social integration or therapeutic impact has often overshadowed musical development for students with disabilities (Adamek and Darrow, 2012, p.83). Emerging research reveals a shifting of focus away from a therapeutic perspective on student engagement with music making and learning, towards an examination of student's musical development and competencies within inclusive environments (Jellison, 2012; Adamek and Darrow, 2012). Increasingly, research shows that students with disabilities can develop musical skills alongside their typically developing peers, when given the appropriate support (Veenman and Elshout, 1995).

Research on musical development reveals that children with disabilities demonstrate an equally wide range of musical abilities as their typically developing peers (Darrow, 1984; Cassidy, 1992; Ockelford et al, 2009).⁴⁵ Within

⁴⁴ Adamek and Darrow suggest that the principles of Universal Design can also be applied to music education research. (Adamek and Darrow, 2012, p.90). In order to facilitate the voices of inclusive band participants, their parents, and their teachers, to be heard, in relation to their experience of inclusive music making using DMIs, this study takes these principles of Universal Design for Learning and the Universal Design for Research into consideration.

⁴⁵ One of the most significant bodies of systematic research in the area of assessment and accreditation for music students with disabilities has been conducted during the Sounds of Intent initiative, established by Dr. Adam Ockelford and Dr. Graham Welch at the Institute of Education, London in 2002 (Ockelford, 2008, 2009, 2012; Ockelford et al., 2009).

a Universal Design for Learning framework, Jellison suggests that meaningful curricula should include both short and long-term goals that are identified in collaboration with parents, teachers, other professionals and the students themselves, where appropriate (Jellison, 2015, p.109-112). She proposes that areas for goal development should focus on skill development, available practice time using skills in meaningful ways, along with the independent use of skills beyond the music classroom (Jellison, 2012, p.68).

Collaboration for Inclusive Music Making and Learning.

Collaboration is a vital tenet of inclusive music practice. ‘Collaboration is more than communication. It is a coordinated effort to make the educational experiences of children inclusive’ (Jellison, 2012, p.75). Jellison emphasises the importance of ongoing collaboration of all stakeholders within inclusive music education settings to ensure that all children have meaningful music experiences in school, which will lead to a lifelong love of ‘Musiking’ (Small, 1998). Collaboration in curriculum design and decision-making processes, amongst parents, special educators, music therapists, students, and other professionals, is crucial for the development of inclusive music education environments (Jellison, 2012, p.76).

Often, there is an assumption that physical access alone results in inclusive music engagement. Placing a student with disabilities in a music classroom without the necessary support does not always result in positive interaction amongst students (Jellison, Brooks and Huck, 1984; Kern and Aldridge, 2006). Collaboration amongst students with and without disabilities needs to be

supported in a cohesive way, in order to provide opportunities for students with disabilities to gain autonomy of their own learning alongside their peers. It is common, within inclusive music classrooms, for typically developing students to offer support to disabilities students within musical activities (Jellison, 2015). Furthermore, it is necessary for students with disabilities to have opportunities to undertake leadership roles in order to realise their full ‘capabilities’ (Adamek and Darrow, 2012).

Lev Vygotsky⁴⁶ proposes that peer-to-peer collaboration and subsequent social interaction amongst peers in a classroom builds new skills and knowledge, which are necessary for overall cognitive development (Vygotsky, 1935, 1978). Vygotsky argues that learning does not take place solely within an individual. He suggests that learning is a social and collaborative activity where people create meaning and values through their interactions with one another. The support of this interaction within a classroom, through small group work and peer-to-peer interaction, is a widely accepted educational strategy that has a significant impact upon the support of students with disabilities, within an inclusive music classroom. This model of peer-to-peer interaction has been recognised as having a positive effect on educational engagement, particularly for vulnerable students (Roherbeck et al, 2003, cited in Jellison, 2012 p.74). Pettigrew and Troop (2006) found that peer-to-peer interactions reduce prejudices and changes attitudes beyond groups (Pettigrew and Troop, 2006). Jellison and Taylor, in 2007, also found that small group or peer tutoring increased positive interactions between

⁴⁶ Vygotsky was the founder of Social Constructivism for learning, a branch of constructivist thought. (Vygotsky, 1978).

students with, and students without, disabilities (Jellison and Taylor, 2007). The perceived positive impact of peer-to-peer interaction within inclusive music environments, amongst other benefits and challenges, as discussed by Adamek and Darrow, are presented in the following section (Adamek and Darrow, 2012).

Benefits and Challenges of Inclusive Music Education

In 2012, Adamek and Darrow undertook research to analyse and compare the perceived benefits and challenges of inclusive music education on the one hand, and segregated music education on the other hand (Adamek and Darrow, 2012).

The perceived benefits of inclusive music classes included opportunities for an increase in peer interaction, which could result in all students accessing reciprocal positive models for behaviour and musical skills. Challenges of inclusive environments included insufficient and inconsistent expertise amongst general music teachers within inclusive environments. Finding the time necessary to adapt materials for the diverse learners was recognised as a significant challenge in the development of inclusive music classrooms. The perceived benefits of segregated music classes included the availability of resources and expertise in areas such as assistive technology and augmented communication devices to adapt materials for a music class. Generally, segregated music classes have fewer numbers, enabling students to gain more one-to-one attention from the music educator, as well as having opportunities to take leadership roles within the music class. The challenges of segregated music classes, as perceived by the research respondents in Darrow and Adamek's research, include the lack of opportunities for social interaction with typically developing peers (Adamek and Darrow, 2012, p.89). A prominent challenge for

the development of inclusive music education provision in Ireland, both inside and outside of school contexts, is to prepare future music teachers to be confident, competent and enthusiastic about teaching students with a wide range of abilities.

In the next section of this chapter, I explore a range of research from the field of sociology of music education that explores issues of equality, social justice and democracy to address the diversity that exists in our music classrooms today. Examining this research within an inclusive music education framework provides further theoretical context for the inclusive practice in this study.

A Sociological Perspective on Inclusive Music Education

Over the past two decades, there has been an increase in music education research adopting a sociological lens to explore contemporary issues within the field (Wright, 2010; McCarthy, 2002). Sociology is the study of human societies and provides a significant contribution to the understanding of inclusive music practice (Wright, 2010, p.2). The theories of Auguste Comte, Karl Marx, Emile Durkheim and Max Weber, provide the platform for twentieth century sociologists, such as Bourdieu and Bernstein, to explore the complex relationships between culture, education, society and music (*ibid*, p.12). Drawing from these theorists, Ruth Wright advocates for music education research and practice to emerge from a sociological perspective, while having a focus on issues of inclusion and collaboration. She suggests that this sociological paradigm shift, would ‘level the playing field’ for children and young people of less advantaged social groups participating in music education, including

children with disabilities (Wright, 2010).

Social Justice, Democracy and Inclusive Music Education

Recently there has been a growth in music education research that focuses on issues of social justice and democracy. (Silvermann, 2012; Allsup and Shieh, 2012; Gould et al., 2009). Social justice involves the unrestricted ability to realise one's potential within societal structures, such as educational institutions, of which music education is a part (Bazan and Hellman, 2014, p.17). Unfortunately, there are many restrictions and inequities within educational frameworks worldwide. CRÈME (Consortium for Research in Equity in Music Education), established in 2010, is committed to advancing the rationale for an increased awareness of equity and social justice issues in music education (CRÈME, 2014). Before CRÈME, the specially dedicated journal issue of music education research in 2007 was a platform for researchers and practitioners to explore issues of social justice in relation to the development of music education theory and practice (Bowman, 2000, 2007; Bradley, 2006, 2007; Elliott, 2007; Elliott and Veblen, 2006; Gould, 2004, 2005, 2007; Gould et al., 2009; Koza, 1994; Lamb, 1994, 1996; Morton, 1994; O'Toole, 2002, 2005; Woodford, 2005; Jorgenson, 2007; Higgins, 2007). Much of this discourse is based upon the premise that practitioners and educators have an obligation to ensure equity within their practice, workshops and classrooms. This call for social justice in music classrooms resonates strongly with inclusive music education principles and ambitions.

When discussing issues of social justice in music education, Bowman suggests that, 'We are unlikely to make meaningful progress until and unless we

recognise that the relationship between musical issues and social ones is not peripheral or contingent but constitutive' (Bowman, 2007, p.110). Within the music education discourse, the recognition of the social outcomes of 'Musicking' is increasingly emerging. There is however, a reluctance to recognise the political impact of music making and learning. (Woodford, 2012, p.698). According to Taruskin, music is innately a social, cultural and political activity. Woodford highlights the importance for researchers, philosophers and educationalists to take into consideration the social, cultural and political contexts from which music making emerges (Taruskin, 2004). Music, Bowman points out, is cultural and social by its very nature, but it is also, always, political. He calls for further research to be undertaken from a social justice perspective, in order to examine whose interests have been served currently, and historically, by music education; what kinds of music and values have been supported; who has been included; and who has been excluded? (Bowman, 2007). Woodford stresses that social justice awareness will inform professional thinking and development of 21st century music education provision internationally (Woodford, 2012, p.700).

Wright endorses Bernstein's principles of democratic rights for education as a framework for the examination of music education through a social justice lens (Wright and Philpott, 2012). Bernstein's view of democratic education is based upon three principles: inclusion, enhancement and participation.⁴⁷ Wright

⁴⁷ The potential contribution of Bernstein to music education has largely been ignored and only recently systematically examined and applied (Wright, 2006, 2010, 2010a, 2010b; Wright and Froehlich, 2011). The potential contribution of Bernstein to the development of inclusive music education remains unexplored.

used these three principles to develop a framework as a working model that might be used to guide teachers in their assessment of the extent to which they have included pupils' democratic pedagogic rights within their curriculum (Wright and Philpott, 2012, p.444). She describes this model of music education as focusing on music making from the pupils' perspectives. This music making embeds informal learning into school music, which promotes pupils as curriculum makers and not merely curriculum consumers. It endorses a person-centred approach and values self-expression, discovery, creativity, imagination and relevance. This socially just and democratic model of music education contributes to a vision for inclusive music education internationally (Wright and Philpott, 2012, p.443). Wright does not suggest a denial or abolition of successful models of music education, however, she does advocate for a shift in perspective that would accommodate the democratic right of all young people within music education practice (Wright and Philpott, 2012, p.453).

Sustainability of Inclusive Music Education Programmes

Mota and Figueiredo explores issues of internal and external sustainability of music education programmes (Mota and Figueiredo, 2012). She refers to internal sustainability as the construction of a number of educational principles, which may guarantee the sustainability of a programme and its relevance to the social and cultural contexts in which it exists (Mota and Figueiredo, 2012, p.192). Peter Abb's presents three principles for education.⁴⁸ Abb's first principle

⁴⁸ Abb's three principles for education also resonate with Jellison's inclusive music education guiding principles for inclusive music education.

emphasises engaged participation of students that is ‘biographically’⁴⁹ relevant (Abbs, 2003). Also as music educators and students, he emphasises the importance of making ‘ourselves visible, to declare ourselves, to confess ourselves, to become the free and willing agents of our own actions and understanding’ (Abbs, 2003, p.15). Abb’s second educational principal refers to education as a collaborative activity. He argues that music programmes need to be developed through moments of collaborations and also need to be embedded within a community in order to survive (*ibid*). Abb’s third and final educational principle holds that music is always a cultural activity in which students need to engage on a continuous and progressive basis. He views this third principle as an expansion of music as existential and collaborative in nature, as it refers to the enculturation of music students into a specific discipline (Abbs, 2003, p.17).

External sustainability refers to the social responsibility to construct a coherent and flexible network that comes together to accommodate diversity. This accommodation is achieved by linking schools, teachers, students, families, communities and other stakeholders (Mota and Figueiredo, 2012, p.193). Green suggests that such a network presents significant issues immediately relating to diverse political and socio-economic demands, however, she suggests this can be overcome with clear communication, leadership and coordination (Green, 1995, p.35).

The combination of internal and external sustainability is the way inclusive music education programmes could potentially sustain themselves - internally

⁴⁹ My understanding of Abb’s reference to student’s engagement in ‘biographically’ relevant practice, refers to music that is culturally and socially relevant to the participating student.

through its foundational principles, such as Jellison's guiding principles of inclusive music education, and externally, by involving the whole community in its acceptance and defence (Mota and Figueiredo, 2012, p.195).

Reflective Practice

Critical reflective practice amongst music educators is essential to both the internal and external sustainability of inclusive music programmes, as it is vital to address the diversity within contemporary music classrooms (Pollard and Tann, 1997; Schon, 2009). There is a need to empower music educators with the tools to appreciate and value the music of diverse cultures and to understand what they mean in the lives of many people (Mota and Figueiredo, 2012, p.198). The importance of context is increasingly recognised as a significant factor in the educational process (Bowman, 2001, 2002; Hargreaves and North, 1997). According to Mota and Figueiredo, 'Education is part of a much larger and complex cultural process, which demands a professional able to engage beyond the classroom walls' (Mota and Figueiredo, 2012, p.197). This sentiment is also reflected by Small when he states that,

The big challenge to music educators today seems to me to be not how to produce more skilled professionals musicians but how to provide that kind of social context for informal as well as formal musical interaction that leads to real development and to the musicalizing of the society as a whole (Small, 1998, p.208).

Chapter Reflections

To conclude this chapter, I present discussion about the specific ways in which my research has been informed by some of the ideas discussed above. In this

study I align myself with Lubet's arguments that access to music education for all students is a human right and should be unquestioned (Lubet, 2011). Wright suggests that inclusion is one of the main issues facing music educators in the 21st century (Wright, 2010c, p.251). Throughout this research, I aim to contribute new knowledge to this music education inclusive discourse, by providing an insight into the development of inclusive music bands in Cork city and the use of Digital Musical Instruments (DMIs) to enhance meaningful engagement for students with disabilities. When developing the three inclusive bands, Circles, Till 4 and Mish Mash, I took into consideration Jellison's guidelines for inclusive music practice within the framework of Universal Design for Learning. Collaboration and adaptations strategies, such as the use of DMIs, to accommodate diverse learning needs featured strongly in all bands. Also, the perceived benefits and challenges, as presented by Adamek and Darrow, influenced the incorporation of collaborative planning, small number of ensemble members and multiple facilitators, with diverse expertise in each band.⁵⁰ Engaging in reflective practice was also central to this process, where the facilitation of the democratic rights (inclusion, enhancement and participation) of each band member was always core objective. All three of the inclusive bands are strongly connected and respond to the socio-cultural environment of local communities from which they emerged. The cultural, social and political contexts of this inclusive practice have had a significant impact on the three inclusive bands, in terms of development as well as internal and external

⁵⁰ Each band had a maximum of eight members and a minimum of two facilitators. Each band incorporated a wide range of DMIs and involved facilitators that had expertise in various assistive and augmented communication methods.

sustainability. I conduct a more comprehensive discussion in the findings section (Chapters 8, 9 and 10) of this thesis.

This study is based on the belief that music educators, both within formal and informal settings, across the world, have a responsibility to dismantle barriers, physical and attitudinal, that prevent individuals with disabilities engaging in music (McPherson and Lehmann, 2012, p.7). Research in music education has shown that individual music educators have considerable power to affect change (Allsup, 2004; Schmidt, 2005; Abrahams, 2004, 2005; Lamb 1996; Wright 2008). Wright argues that, ‘it is the ongoing responsibility of music educators and their pupils to question the values that underpin music education and to articulate those to which they aspire’ (Wright, 2012, p.456).

Through theoretical and practical explorations, I aim to present the potential of inclusive music practice that uses DMIs, to enhance meaningful music making and learning experiences that are universally accessible. In Chapter 3, I explore literature relating to the emerging field of DMIs and music education and I also introduce the DMIs that are used within the main bands in this study: Circles, Till 4 and Mish Mash.

Chapter Three

Digital Musical Instruments

Introduction

In this chapter, I present literature that explores the use of Digital Music Instruments (DMIs) for music making and learning. I used a range of DMIs within each of the inclusive bands in this study, in order to provide access to active music making and learning for band members with limited movement. The term DMI describes electronic instruments that are composed of two parts - a controller unit (for example, a gestural sensor or pressure switch), and a sound generation unit (for example, music software such as Ableton Live⁵¹) (Miranda and Wanderley, 2006). A controller can take any form and can be developed in response to the physical capabilities of the player; for example, eye movement can trigger music using an eye gaze controller, or the small movement of one finger can be used to trigger a sensor in order to make and perform music. The controller of a DMI and the sound generation software are independent of each other, but are connected by digital information systems such as MIDI (Musical Instrument Digital Interface) (Miranda and Wanderley, 2006, p.3). MIDI is a digital language developed in the 1980s and has been one of the most significant music technology developments of the last three decades. Its main purpose is to connect the controller to sound generation software via digital information (Miranda and Wanderley, 2006). MIDI development has expanded the palette of

⁵¹ Ableton Live is a software music sequencer and Digital Audio Workstation (DAW), that is designed to generate sounds for live performances and can be used for composing, recording, arranging, mixing and mastering of music (Ableton, 2013).

sounds that are available digitally and, as a result, new creative sonic landscapes, previously unavailable, have emerged.

Musical practice, either educational or as part of wider cultural practices, has been significantly influenced by these technological developments. This has strongly manifested through instrument design (Miranda and Wanderley, 2006; Ruthmann, 2007). DMI development offers diverse and adaptable possibilities, beyond conventional instruments, to create high quality music, with minimal movement.

This chapter is composed of four sections. In the first section, I begin by briefly outlining the evolution of DMIs. I also describe the gestural analysis process undertaken in this study with each DMI player, in order to ensure meaningful music making and learning. In the second section, I introduce a range of DMIs used in the three inclusive bands in this study. In the third section, I present international research, which explores the use of DMIs in music making and learning contexts, such as within music therapy, music education and community music practice. I also introduce inclusive practice that incorporates DMIs and that has inspired the development of the inclusive bands in this study. In the final section, I present literature that explores the relationship between meaningful engagement and technology in music education.

Evolution of Digital Musical Instruments

Traditionally, musical instruments contained both the mechanisms of sound generation and control in one integrated physical system (Odowichuk et al., 2011, p.836). The evolution of musical instruments has progressed significantly,

with increasing developments made in the domain of electronics. When electricity was first introduced at the end of the 19th century, instrument designers began experimenting with the new possibilities that electricity offered. The earliest examples of electronic instruments are the Theremin (built in 1920 by Lev Termen), the Ondes Martenot (built in 1928 by Maurice Martenot), and the Trautonium (built in 1930 by Friedrich Trautwein) (Miranda and Wanderley, 2006, p.2). These instruments influenced significant developments in subsequent musical instrument hardware and software, which began in earnest in the 1950s (Miranda and Wanderley, 2006). Miranda and Wanderley revealed that, as a result of several recently developed synthesis⁵² techniques a musician is able to reproduce acoustic sounds digitally, along with having the ability to create new sounds, which are impossible to produce with existing acoustic instruments (Miranda and Wanderley, 2006, p.1).⁵³ These developments in sound synthesis, combined with advancements in control technologies such as sensors and pressure switches, have led to the genesis of a new classification of musical instrument in which the creation of the sound and the controller are no longer necessarily tightly connected.

The gestural controller of a DMI, for example, a movement sensor, refers to the region of the device in which the physical interaction between the performer and the instrument takes place. A range of information, such as position and speed of movement, interpreted as streams of numerical data, is

⁵² Sound synthesis is the technique of generating sound, using electronic hardware or software, from scratch. The most common use of synthesis is musical, where electronic instruments called synthesizers are used in the performance and recording of music. (Electronodes, 2015).

⁵³ The most common way to generate such digital sound is through synthesizers or through general-purpose computers (Miranda and Wanderley, 2006, p.2).

subsequently mapped to the sound generation unit. Mapping refers to a process where information acquired through controllers is translated to digital signals of communication, for example MIDI, which is understood by the input of sound generation software to produce the digital sound (Miranda and Wanderley, 2006, p.3). This separation between gestural controller and sound generation is impossible with acoustic instruments. Within acoustic instruments, the gestural interface is usually part of the sound production unit. This is evident, for example, with a flute where the keys and holes function as the gestural interface and are also responsible for sound production. The separation of the gestural interface and sound generation enables new methods of playing music that can be tailored specifically to each performer or context. The fixed causality between an action and a sound generator does not necessarily apply. For example, with movement sensors as gestural controllers, the same gestures can lead to completely different sounds (Miranda and Wanderley, 2006, p.4). The functionalities of conventional musical instruments are no longer linked to physical constraints, leading to more adaptable and accessible ways of music making. Crow emphasises that the increasing use of DMIs and MIDI is leading to greater accessibility to music making and learning (Crow, 2006, p.128).

A DMI controller can take any form. Some DMIs use existing acoustic instruments as inspiration for their design, but expand the parameters of the control surfaces beyond their usual functionality (Miranda and Wanderley, 2006, p.20). They can be augmented by the addition of various sensors. (Miranda and Wanderley, 2006, p.1) These instruments are defined in Odowichuk et al. as, ‘electro-acoustic instruments, combining natural acoustics with electronic sound

and/or electronic control means' (Odowichuk et al., 2011, p.836). Other DMIs deviate from the form of existing acoustic instruments. Sensor technologies are fundamental in these DMIs, as they offer the means by which to acquire musical gestures (Tindale et al., 2011, p.50). The physical gestures of the performer form the basis of the information gathered by the sensor. A process of gesture analysis is necessary to assign an appropriate DMI to facilitate the specific gestures of a player (Cadoz and Wanderley, 2000, p.5).

Gesture Analysis

The term gesture has varying meanings and definitions attached to it. Cadoz and Wanderley suggests that there cannot be any one single definition of the term (Cadoz and Wanderley, 2000, p.71). They stress that, in terms of music making, it is important that gesture is not merely understood as 'only a hand sign' (Cadoz and Wanderley, 2000, p.74). Christophe Ramstein proposed three approaches to gestural analysis: a phenomenological approach (a descriptive analysis), a functional approach, and an intrinsic approach (from the musician's point of view) (Ramstein, 1991). The first phenomenological approach refers to three gestural criteria: cinematic, spatial and frequential. The cinematic criterion analyses movement speed of the gesture; the spatial criterion refers to the size of the space where the gesture takes place and the frequential criterion takes into consideration movement decomposition in terms of Hertz. The second functional approach refers to the function a gesture may perform in a specific situation. The third approach – intrinsic analysis – refers to the conditions, in which a gesture is produced, for example, a performer's gestural response when performing to a

large audience, as opposed to playing in isolation. The importance of this gesture analysis process to ensure meaningful engagement of DMI players, is emphasised by Miranda and Wanderley in their book ‘New Digital Musical Instruments: Control and Interaction beyond the keyboard’ (Miranda and Wanderley, 2006).

Digital Musical Instruments in SoundOUT Inclusive Bands

In this second section, I introduce a range of DMIs used by the inclusive band members in this study. These DMIs incorporate a range of controllers; for example, air generated sensors (Magic Flute) movement sensors (Soundbeam) pressure sensors (Soundbeam) and eye tracking sensors (The EyeHarp). I predominantly connected these controllers to the sound generation software Reason.⁵⁴

Soundbeam Technology Soundbeam⁵⁵ is a DMI used in all three of the inclusive bands in this study.



Figure 6: SoundOUT students using Soundbeam - John using beam and Catherine using switch.

⁵⁴ Reason is a DAW for creating and editing music and audio developed by Swedish software developers Propellerhead Software. It emulates a rack of hardware synthesizers, samplers, signal processors, sequencers, and mixers, all of which can be freely interconnected (Propellerheads, 2015).

⁵⁵ Please refer to Clip 1 - Soundbeam on the SoundOUT Inclusive Music Bands DVD.

Soundbeam refers to a device that is composed of beams and switches (see Figure 6). The beams use sonar technology to convert gestures into digitally generated sound, using MIDI (The Soundbeam Project, 2015). These sensors emit sonic pulses, which are inaudible to the human ear. Interruption of, and movement within, these ultrasonic pulses translate information about the distance, speed and direction of these movements into MIDI signals. These signals trigger digital sounds and samples in the sound generation software (Reason) on a laptop. Soundbeam encompasses various ranging controls, which enables the invisible beam to be compressed to just a few centimetres and expanded up to 6 metres; accommodating the movements the performer desires or is capable of playing (Swingler and Brockhouse, 2009). Sequences of notes can be inputted into the Soundbeam system, which can then be triggered, by the movement sensors and switches, enabling scales, chords and melodies to be played by the performer. The beams can be adapted to respond to a range of gestures, resulting in accommodation of a broad range of mobility.

Electro-acoustic composer, Edward Williams, created Soundbeam in the early 1980s, to enable contemporary dancers to experience a unique real time interaction between movement and sound within live performances. The development of Soundbeam was inspired by the kinetic approach to musical performance, previously demonstrated by the Theremin (or often referred to as the Theremin). Williams developed Leon Theremin's idea of using a 'touch free' device for musical performance through the development of movement sensors for musical performance. The use of Soundbeam technology within contemporary dance practice was highly acclaimed but was soon surpassed by its

inclusive potential within educational and therapeutic practices. Soundbeam is primarily used to enable people with limited movement to access music making and performance within educational, community or therapeutic settings (Swingler and Brockhouse, 2009).

Since its inception, Soundbeam creators developed the system in response to the varying needs, interests and ambitions of its users, as well as expanding in tandem with technological advancements, particularly in the area of MIDI.



Figure 7: Desktop Soundbeam (DTSB) and Soundbeam 5

Both Desktop Soundbeam (DTSB) and Soundbeam 5 systems enable players to trigger notes, chords and samples in sequence (The Soundbeam Project, 2015). They also facilitate players to use effects such as vibrato, pitch bend, chorus, panning, phasing, portamento and reverb, in real time. DTSB connects to a computer whereas the latest version, Soundbeam 5, is a standalone version, which has an internal sound generation unit. All Soundbeam versions support ensemble music making, through the use of 4 movement sensors and 8 switches, to play melodies and harmonies simultaneously.

The Magic Flute

The Magic Flute⁵⁶ is a DMI used in the Till 4 and Mish Mash inclusive bands.



Figure 8: SoundOUT students playing the Magic Flute

It was specifically designed to enable people with limited arm movement to make music independently. The Magic Flute was collaboratively created in 2009 by Brian Dillon (Kilkenny, Ireland), David Whelan (New York, USA) and Ruud van der Wel (Rotterdam, Netherlands). It is a self-contained instrument featuring an in-built control and digitally generated sound module. The aim of the Magic Flute is to enable people, with physical disabilities, ‘to perform live electronic music that can be at the highest professional quality’ (The Magic Flute, 2014).



Figure 9: The Magic Flute

⁵⁶ Please refer to Clip 2 The Magic Flute on SoundOUT Inclusive Music Bands DVD.

The Magic Flute is placed on an adapted stand, similar to a microphone stand, and can be moved up and down using a mouthpiece. A gyroscope⁵⁷ placed inside the flute detects the angular position and converts it into a note or pitch, via MIDI (The Magic Flute, 2014). The breath into the mouthpiece can control dynamics of the notes, made possible by an air pressure sensor⁵⁸. The Magic Flute has 20 default scales or, alternatively, notes can be recorded into the flute via a MIDI keyboard. A significant feature, which distinguishes the Magic Flute from Soundbeam technology, is the inward breath control. This control feature enables users the independence to turn on or off the system, as well as change scales, position and sounds. This option is not available to students with limited movements using Soundbeam technology, as they depend on a facilitator to 'input' sequences of notes and sounds. Similar to Soundbeam, the Magic Flute is MIDI connectable, which allows connectivity between DMIs and higher quality sound generation software or devices.

The Magic Flute was initially designed specifically for members of My Breath My Music⁵⁹ in Rotterdam. My Breath My Music is a foundation that aims to provide opportunities for people with severe physical disabilities to play music, using either self-adapted electronic instruments, or electronic instruments they have developed themselves. The Magic Flute was originally used as a tool for respiratory therapy for people with limited lung capacity in My Breath My

⁵⁷ A gyroscope is a device that measures rotational motion (Miranda and Wanderley, 2006, p.148).

⁵⁸ Sensors that measure air pressure are often used in DMIs that are inspired by wind instruments. This sensor is also used in the Roland Wx5 wind synth, which is used by Mish Mash band members.

⁵⁹ More information can be found on the My Breath My Music website, Available at: www.mybreathmymusic.com.

Music, but has subsequently been expanded into wider music making and learning realms. SoundOUT collaborated with My Breath My Music in 2011 to develop effective approaches in using the Magic Flute within the inclusive music bands presented in this study. Karin van Djk, a prominent member of My Breath My Music, together with founder of My Breath My Music, Ruud van der Wel, from Rotterdam, came to Cork to give a workshop on how to use the Magic Flute. Karin has limited mobility, restricted to head movements. Using the Magic Flute she engaged in a collaborative performance at the CIT Cork School of Music, as part of the Cork City Life Long Learning Festival 2011.

iPad Technology

The three SoundOUT inclusive bands regularly use iPad applications⁶⁰ (apps) as DMIs for music making, composition and performance activities.

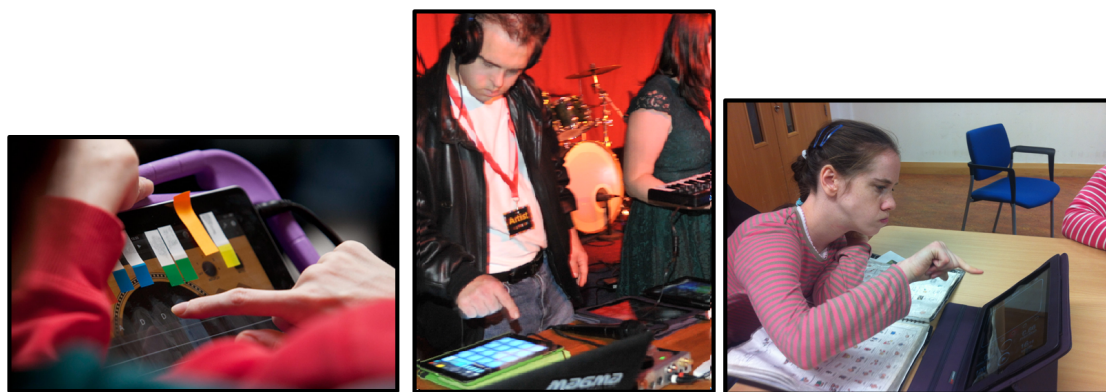


Figure 10: SoundOUT students using iPad technology as DMIs

The iPad, a tablet computer developed by Apple Inc, was first released in 2010. Between 2010 and 2014, there have been approximately 200 million iPads sold

⁶⁰ Please refer to Clip 3 - iPad on the SoundOUT Inclusive Music Bands DVD.

worldwide. All iPads have Wi-Fi connectivity, which allows for the downloading of apps, which are often free or priced at a set cost. Since the introduction of the iPad, there has been an explosion in its use in education and music making settings. iPad technology has been positively reviewed, particularly for its portability and design, as well as the dynamic applications that can be accessed on the device (Waters, 2010), the large quantities of information it can carry (Galuszka, 2005), and the ability to afford students wireless connection to the internet. Emerging research is exploring the use of iPad technology as a tool to support students with disabilities, in educational settings.⁶¹ The size and adaptability of the iPad are features that may render it more suitable for students who have poor fine motor skills or limited vision. Shah argues that iPads can offer students a sense of independence that they may have never experienced before (Shah, 2011). The main apps used in the bands in this study are Korg's iKaossilator and Garageband.

The iKaossilator

The iKaossilator is an app that enables performers to play music by using limited movement. At present, there are 150 diverse in-built sounds and musical styles that can be played with the simple stroke of a finger. The ability to assign a specific key and scale enables musical precision and the option of playing as part of a group. This app can be used for real time performances or used as a tool to create original tracks. These live performances or tracks are created easily using

⁶¹ It has been suggested that using iPad technology could facilitate reading improvement of students with attention deficit hyperactivity disorder (McClanahan et al., 2012) and support students on the autism spectrum in using spell-check tools (Kagohara et al., 2012).

the loop sequencer, using up to five parts, which are colour co-ordinated.⁶²



Figure 11: Korg's iKaossilator

Garageband

Garageband is used as a DMI in all three of the SoundOUT bands. It is used during live performances and as a composition tool to create and record new tracks.



Figure 12: Garageband Application

⁶² More information can be found on the Korg website. Available at: www.korg.com/ikaossilator (Accessed: 15 June 2015).

Garageband is software developed by Apple Inc, as part of the iLife software package on Mac OS X computers.⁶³ In 2011, the Garageband iPad app was created. This is accessible to iPad users at a very low cost. The portability and light processing requirements of Garageband make it ideal software, which can even be used on a mobile phone. Garageband features include audio recording, virtual software instruments such as virtual keyboards, guitars, string ensembles, drums and others. Each virtual instrument has adjustable parameters including the standard attack, decay, sustain and release. These parameter controls enable creation of a wide palette of sounds and key selection. There are also guitar specific tracks focused on amplification, and effect processing. Infrared switch technology access is also available with Garageband, to allow control for students with limited movement.

The EyeHarp

The EyeHarp⁶⁴ has been the latest addition to the DMIs used within the inclusive music bands.

⁶³ This was developed under the direction of Dr Gerhard Lengeling, formerly of German company, *EMagic*, creators of Logic Audio. The Garageband application was released in 2004. There are currently 10 updated versions of Garageband. The latest was released in March 2014 - version 10.0.2. For more information on Garageband can be found on the Apple website. Available at: www.apple.com (Accessed: 15 May 2015).

⁶⁴ Please refer to Clip 4 -The EyeHarp on SoundOUT Inclusive Music Bands DVD.

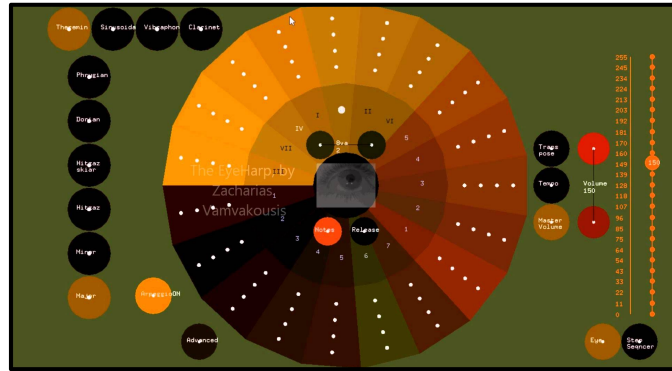


Figure 13: The EyeHarp

The EyeHarp is an eye-controlled DMI developed as a Masters project by Zacharias Vamvakousis in 2011 at the Universitat Pompeu Fabra, Barcelona. The premise of the project was to provide a reliable gaze controlled musical instrument, which would allow for real-time control over rhythms and melodies (Vamvakousis, 2011, p.3). Vamvakousis also incorporated options in the EyeHarp to allow for control over the expressive aspects of the sound, such as vibrato and amplitude (*ibid*). Cillian McSweeney, from Circles, is the main user of this DMI. He uses the EyeHarp software in conjunction with the internal eye tracker embedded in his MyTobii communication device.⁶⁵

⁶⁵ MyTobii P 10 is a portable eye-controlled communication device. Similar to a computer, it has the capability to download music software and connect to hardware. More information on MyTobii can be found on the Tobii website. Available at: <http://www.tobii.com/en/assistive-technology> (Accessed 2 January 2015.)



Figure 14: Cillian from Circles using the EyeHarp

Eye tracking processes are central to the operability of the EyeHarp. Eye tracking refers to the process of using sensors to locate the point of a person's gaze or to follow and record the movement of the point of gaze (The Eye Tribe, 2014). Several techniques exist to capture this information. The infrared reflective approach was used in the creation of the EyeHarp, as it is easily accessed and implemented. This approach requires the use of light emitting diodes (LEDs) to illuminate the eyes, producing reflections off the corneal surfaces and supplying critical geometric information about the orientation of the eyeball (Vamvakousis, 2011). This information is interpreted and converted to musical events by software such as the EyeHarp. The original eye-tracking interface used for the EyeHarp project was created using a PlayStation Eye digital camera, modified in order to be sensitive to infrared light. The output from the camera was then sent to EyeWriter open source software, which tracked the coordinates of the eye to positions on a screen (Vamvakousis, 2011, p.19).

The use of eye tracking as an interface to DMIs is relatively underdeveloped and the majority of examples, to date, have been decidedly limited in the scope of their practical application. Andrea Polli was one of the

pioneering exponents of eye controlled music creation with her piece ‘Intuitive Ocusonics’ (Polli, 1999), featuring eye tracked instruments in live performance (Vamvakousis, 2011, p.15). Other examples include Eye Music, which incorporated the LC Technologies Eye Gaze System, a commercial eye-tracking system, and Grid 2, which was controlled by the commercial MyTobii eye tracker (MyTobii, 2013). In both the latter cases, issues presented themselves, relating to the rhythmic and note selection accuracy of the onscreen instrument. A central aim of the EyeHarp is to address many of these inaccuracy issues. In the following section, I introduce research that explores the use of DMIs in diverse music making and learning contexts.

Digital Musical Instruments in Therapy, Education and Community contexts

The technological developments, including the DMIs discussed above, are changing the face of music making and learning worldwide (Wise et al., 2011). In this third section, I introduce research from a variety of disciplines, including music therapy, music education and community music fields, which have influenced the integration of the DMIs in the three inclusive music bands in this study.

Digital Musical Instruments and Music Therapy

The use of DMIs in therapeutic settings has been limited. However, a number of in-depth studies have taken place, which have profoundly influenced subsequent

research in educational sectors.⁶⁶ The use of Soundbeam technology has been acknowledged as having expressive, empowering and therapeutic potential within clinical music therapy (Ellis 1997; Magee, 2006; Magee and Burland, 2008; Hasselblad et al., 2007; Hillman, 1998; Gaertner, 1999). Traditionally, in music therapy practice, conventional instruments such as guitars, piano and pitched and non-pitched percussion instruments are often used. Many of these conventional instruments fail to meet the needs of individuals with physical disabilities, particularly those with profound limited movement (Magee and Burland, 2008). The majority of acoustic instruments are inaccessible for people with physical disabilities. As most musical experiences of people with limited mobility can often be passive in nature, the use of DMIs enables small movements from a hand, a foot or even an eyelash, to produce aesthetically pleasing sounds. Incorporating DMIs into music therapy sessions, equally distributes the musical 'power' between the music therapist and client. This equal distribution process enables DMI players to initiate and control their creative interactions and musical ideas independently, regardless of mobility (Magee, 2006).

In the UK, Soundbeam is the most frequently used DMI in music therapy practice, however, music therapists in Ireland and Britain have been slow to respond to technological advancements in comparison to US counterparts (Magee, 2006; Swinger, 2002). Magee has undertaken research, which explores the practices and attitudes of using DMIs in clinical music therapy settings

⁶⁶ Phil Ellis's research on sound therapy and Wendy Magee's research on the use of DMIs in music therapy practice are the most in-depth studies in this field (Magee, 2006; Magee and Burland, 2008; Ellis 1997; Ellis and Van Leeuwen, 2000).

(Magee, 2006). A survey carried out as part of Magee's research, highlighted that 69% of music therapists, who responded to the survey, indicated that they never used DMIs within their work (Magee, 2006, p.142). According to Magee, the principal barrier to incorporating DMIs and wider electronic music technology into music therapy practice, is the lack of training at an introductory level and skills development at a more advanced level (Magee, 2006). In 2008, Magee undertook further qualitative research to understand the limited practice of using DMIs and electronic music technology within music therapy settings in the UK. She undertook an in-depth analysis of six music therapists, using a range of DMIs and other electronic music technologies within clinical settings in the UK. Issues dealing with the process, risks, opportunities, identity and resources used in practice emerged. Such thorough examination of multiple case studies highlighted challenges of using DMIs, however, the research demonstrated the overall positive therapeutic impact of using DMIs and electronic music technology, in particular Soundbeam technology, within clinical music therapy practice in the UK (Magee and Burland, 2008).

Digital Musical Instruments and Sound Therapy

Dr Phil Ellis from the University of Sunderland is the most widely published researcher who examines the area of using Soundbeam within therapeutic settings in the UK. He describes Soundbeam as 'an excellent example of technology enabling greater equality and access' (Ellis, 1997). In 1994, Ellis began developmental research into a non-invasive approach to using the Soundbeam system for therapeutic purposes with individuals with profound and multiple disabilities, as well as with older adults in long-term care homes. This

approach was inspired by the fact that participants became increasingly motivated when they recognised that they could produce sounds independently using Soundbeam technology. Ellis uses the term ‘aesthetic resonance’ to describe the moments where participants have ‘that was me’ realisations. During these moments, participants achieve control and expression independently, resulting from exploration, discovery and creation. He states that the phenomenon of these ‘aesthetic resonations’ stem from the enjoyment and self-motivation of the participant. Aesthetic resonations, through the use of Soundbeam technology, are central to an approach Ellis coined as sound therapy (Ellis and Van Leeuwen, 2000).

Sound therapy bases its ethos on a non-invasive and reflective approach, which places the individual at the centre of the sound-making activity. At the individual’s own pace, the carefully considered sonic environment is explored and controlled independently, which gradually and innately facilitates the development of skills - physical, cognitive, expressive and communicative. Ellis maintains that ‘carefully chosen technology’ including Soundbeam technology together with ‘the creation of a special and highly controlled sonic environment and the focus on aesthetic resonance- the inner world of the individual’ are vital to this approach (Ellis and Van Leeuwen, 2000, p.6). Ellis is adamant that this approach is not to be confused with music therapy methodologies. He states that sound therapy contrasts greatly with traditional models of music therapy, where the focus of an activity is on the treatment of an individual through direct intervention. Ellis describes the music therapy approach as working from the ‘Outside In’, where ‘the essence [of sound therapy] lies in the internal motivation

of the individual working from the inside-out' (*ibid*).

In 1997, Ellis expanded this study to combine the auditory elements of sound therapy with a tactile dimension. This is referred to as vibro-acoustic sound therapy. In 2004, he once more expanded this study into the iMuse programme, an interactive multi-sensory environment programme. This non-invasive approach consisted of visual, tactile and auditory elements controlled independently by participants using Soundbeam technology (Ellis et al., 2008). Over an 18 year time span, Ellis has provided extensive systematic evaluations for the use of Soundbeam technology within sound therapy, vibro-acoustic therapy and iMuse programmes, involving children and adults, with disabilities, as well as older adults within long-term care homes. Embedded in a grounded theory approach, Ellis adopted ethnographic research methods, including participant observation, to examine progression and development in these programmes. To assist longitudinal analysis, he also developed a qualitative video-based research method called video layered analysis (*ibid*). Video layered analysis is an approach that disassembles video recordings made over several months or years, and reassembles the data in order to reveal a picture of developmental progression (Ellis and Van Leeuwen, 2000). Through multiple case studies, he identified nine criteria of progression and development using Soundbeam technology in sound therapy and iMuse programmes (Ellis and Van Leeuwen, 2000, p.11). These nine criteria are:

1. From involuntary to voluntary
2. From accidental to intended
3. From indifference to interest
4. From confined to expressive
5. From random to purposeful

6. From gross to fine
7. From exploratory to preconceived
8. From isolated to integrated
9. From solitary to individual (Ellis, 1995).

Ellis' research has inspired further research, examining how such multi-sensory environments, incorporating Soundbeam, can be used to stimulate play and communication for children and adults with disabilities through self-expression (Hasselblad et al., 2007). Such in-depth examination into the role of Soundbeam music technology, in developing physical, cognitive, expressive and communicative skills, has been of significant interest within the special education sector. Ellis' nine areas for progression in sound therapy practice provide a model for progression and development in therapeutic settings. However, it does not take into consideration the development of musicality, an element that is particularly relevant to special education settings and inclusive music education settings. In the following section, I present literature relating to the use of DMIs in music education settings.

Digital Musical Instruments and Music Education

There is an evolving body of literature emerging around the creative and collaborative use of music technology within educational settings (Ruthmann and Mantie, 2015; Burnard, 2012; Himonides, 2012). According to Hallam, new technologies, such as DMIs, should be utilised more, when responding to the lack of progressive opportunities for people with disabilities to engage in music education (Hallam, 2001). Himonides advocates that, in contemporary society, technology is an 'integral – an unavoidable – part of the musical engagement,

development and education process' (Himonides, 2012, p.430). As of now, limited studies exist which examine the role of DMIs in music education settings (Swingler and Brockhouse, 2009). Watts, McCord and VanderLinde Blair's (2015) chapter 5 'Assistive Technology to Support Students in Accessing the Music Curriculum' in the book *Exceptional Pedagogy for Children with Exceptionalities* (Vanderlinde Blair and McCord, 2015), provides a practical and informative overview of the range of low, middle and high tech assistive technology that can be used for music activities in school settings.

Swingler and Brockhouse, in their article, 'Getting Better All the Time: Using Music Technology for Learners with Special Needs', attempt to address the issue of musical development using Soundbeam technology. Central to their paper is the question: Can interactive music technology (DMIs), with an emphasis on accessibility [Soundbeam], provide a genuine long-term musical learning trajectory in the same way that conventional instruments do? (Swingler and Brockhouse, 2009). The adaptability of DMIs to accommodate individual gestures, offers instant access to active music making for all abilities. Instant accessibility can often give the impression that there is no room for development. In particular, the Soundbeam design has evolved with technological advancements, to facilitate opportunities for musical development of players in order to challenge these perceptions. They suggest that 'the entry point [to music making and learning with Soundbeam technology] may be simple and accessible but the software is sufficiently refined to allow for a developing musical intelligence which can be as sophisticated as the user wants it to be' (Swingler and Brockhouse, 2009, p.2). This technology design and educational approach

echoes the multiple levels of entry and development principle of Universal Design, discussed in the previous chapter (Adamek and Darrow, 2012, p.91). Swingler and Brockhouse emphasise that a balance is required between ability and challenge when using DMIs in educational settings: ‘If the activity is too easy it soon becomes boring; if it’s too difficult the experience becomes stressful and demotivating’ (Swingler and Brockhouse, 2009).⁶⁷ They suggest that, regardless of whether a student has a disability, they are motivated by progress. There is ongoing research in the UK exploring accessible and equitable routes for progression and music development using DMIs in music education. The Associated Boards of the Royal Schools of Music (ABRSM), in collaboration with music consultant David Ashworth, the Soundbeam Project and Drake Music Project,⁶⁸ undertook a forum discussion examining the idea of a set of graded examinations⁶⁹ in the use of DMIs for live performance. Issues and challenges around curriculum, assessment, and resources emerged from this forum (Ashworth, 2011).⁷⁰ Swingler and Brockhouse advocate for the development of,

Teaching, curriculum and assessment resources and protocols which will enable young people with and without special needs to undertake their journey of musical learning using contemporary electronic technology with appropriate recognition and

⁶⁷ This argument resonates with Csikszentmihalyi’s ‘flow’ theory, presented in the introduction of chapter one in this thesis. This concept is discussed in more detail later in the ‘Meaningful Engagement’ section of this chapter.

⁶⁸ The Drake Music Project is a community organisation in the UK that uses DMIs to provide access for people with profound physical disabilities to compose and perform music independently. For information on Drake Music can be found on their website. Available at: <http://www.drakemusic.org/> (Accessed: 7 July 2015).

⁶⁹ ABRSM offer exams to assess progression of learning on musical instruments. There are eight grades, numbered progressively in order of difficulty from 1 to 8. The Royal Irish Academy of Music (RIAM) is the Exam board for instrumental music in Ireland.

⁷⁰ This forum discussed these issues in depth with the wider community of music educators in the UK and beyond on David Ashworth’s website. Available at: www.davidashworth.org.uk (Accessed 6: January 2012).

accreditation for advancing achievements. (Swingler and Brockhouse, 2009, p.56)

They argue that music learning and development is an appropriate goal for young people with disabilities (Swingler and Brockhouse, 2009). The Drake Music Project currently delivers three levels of ‘Introduction to Music’ accredited modules in the UK. In addition, the ABRSM offer a performance assessment for DMI players as an alternative to graded exams.⁷¹ No assessment options from the RIAM are available for DMIs. Within the inclusive bands in this study, students do not undertake graded exams. However, if a student chooses to engage with this graded system, a common route for conventional instrumental players, limited progression routes in Ireland exist for students using DMIs.

In 2005, the National Council for Technology in Education (NCTE) in Ireland conducted an evaluation of using Soundbeam within the curriculum of four Special Educational Needs (SEN) schools. The aim of this study was to ‘establish the suitability of Soundbeam for use with students with severe/profound general learning disabilities or multiple disabilities in Irish Schools.’ (NCTE, 2005) Positive findings emerged from this study, which included the cross-curricular collaborations between drama, music and poetry using Soundbeam. Other findings included the enhancement of the student’s social skills, self-esteem and auditory skills as a result of integrating Soundbeam into curriculum activities (*ibid*). There are many Soundbeam systems in Irish SEN schools and adult disability service centres throughout Ireland, however,

⁷¹ More information on the Performance Assessment option can be found on the ABRSM website. Available at: <http://us.abrsm.org/en/our-exams/other-assessments/performance-assessment/> (Accessed: 7 July 2015).

according to the Soundbeam Project, many are gathering dust in cupboards. There are limited professional development opportunities for music educators and practitioners using DMIs in Ireland.

DMIs are also used outside of formal settings for creative music making and learning, for instance in community practice. In the following section, I introduce community music research and practice that specifically focus on the use of DMIs.

Digital Musical Instruments and Community Music

The accessible and adaptable nature of DMIs is ideal for community music practice. Community music aims to facilitate inclusion, collaboration, creativity, empowerment and democracy for marginalised music makers (Higgins, 2007). In 1998, the Community Music Commission of the International Society of Music Education (ISME) first addressed the enormous potential of music technology in the field of community music in the 21st century:

Technology permits and encourages access to all forms of music making for new groups of creator. Music technology can open windows to music and music making for disenfranchised sections of the population. (ISME, 2011)

Knox, in his article, ‘Adapted Music as Community Music’, explored the role of DMIs within community music practice. He refers to adapted music as aiming to include people with disabilities in order to ‘instigate, develop, and nurture new musical communities.’ (Knox, 2004). He argues that adapted music is founded on ‘participant-centred rather than profession-centred premise’, where enhancing

access for marginalised individuals with disabilities who wish to engage in music making is a primary concern (*ibid*). The Drake Music Project, a community based organisation in the UK, use DMIs to enhance access for people with disabilities to active music making and learning. Their activities are all underpinned by the community music principles of inclusion, celebration of diversity and empowerment.

Drake Music Project

The Drake Music Project is a community-based organisation that has a range of branches in UK. It has been advocating, since the mid-1990s, for the use of DMIs to provide access for people with profound physical disabilities to compose and perform music independently, beyond educational and therapeutic settings. The organisation uses a range of DMIs, to provide unique and innovative ways to foster creativity, nurture talent, develop new skills and bring together artists with and without disabilities (Drake Music, 2015). They strongly promote active music making and performance for creative and expressive purposes rather than for therapeutic reasons. While their work may have therapeutic outcomes, it is not the initial goal. As a prominent Drake musician suggested: ‘I don’t need therapy. What I need is for people to take me seriously as a musician. That won’t happen if they think I’m doing music therapy’ (Watts and Ridley, 2007, p.150). By enabling active music making, the Drake Music Project provides an accessible space for individuals to shape their own identities through music. This opportunity for identity development through active music making using DMIs, strongly resonates with the experiences of the DMI players

in the inclusive bands in this study, particularly with Cillian from Circles. Many Drake musicians, through music, attempt to challenge the perceptions and understandings of a society that, as one of the musicians suggested, ‘makes us even more disabled than we are’ (Watts and Ridley, 2007, p.151). When communication and forms of expression are limited, whether through disability or through lack of resources to facilitate that expression, music making can play a critical role in identity making. Often the issue becomes ‘not how a particular piece of music or a performance reflects the people, but how it produces them’ (Frith, 1996, p.109). Drake musicians argue that referring to music making using DMIs, as just music education or therapy, risks undermining the musician’s identities, as well as the aesthetics of music. They suggest that making music using DMI is a means of empowerment: ‘For some, the digital revolution hasn’t just made music making easier or faster: it’s made it possible’ (Thomas, 2012). The Drake Music Project has been a strong inspiration for the use of DMIs in this study in order to enable individuals with profound physical disabilities to engage in active music making.

Plug IT (2005) was a key project of the Drake Music Project in London. It was designed as a two-year research project, which included residencies in SEN schools in London and South East England. Each residency brought together schools and a small team of Drake musicians. It consisted of weekly two and a half hour music sessions, as well as an end of project performance, evaluated in collaboration with the Institute of Education, University of London (Welch et al., 2006). The research team reported that, with appropriate partnerships that brought together complementary expertise, DMIs could be used effectively with

students with disabilities, to extend musical experiences. This report emphasised emphatically that teamwork and partnership at every stage of process was essential, from local inception, to design, to final event, as well as an awareness of available strengths and ability to contribute to the whole. The necessary skills to work in this area, as advocated by the research team, include, empathy combined with expertise in music technology and education. The research team highlighted the cumbersome nature of assembling the DMIs, as well as the need for them to be used within a clear pedagogical framework to achieve specific learning objectives (*ibid*). The outcomes of this research report, reflects many of the findings in this study, such as a need for partnerships, along with the demanding nature of using DMIs.

Dr. Tim Anderson was a key member of the Drake Music Project since the mid-1990s. He developed a switch operated switch system called E-Scape. This was developed as part of Tim's DPhil at the University of York, with the specific aim of facilitating people with disabilities to compose music completely unaided. During this time, he facilitated a range of professional development residencies both in the UK and Ireland, including one at the Central Remedial Clinic in Dublin, which was included in the RTE documentary, 'In from the Margins'⁷². Since leaving the Drake Music Project in 2007, Anderson operates as an independent consultant, working with school and individuals to support the use of DMIs with 'a clear pedagogical framework'. His work with the SKUG centre in Tromsø, in Norway, has been significant. SKUG centre 'provides

⁷² RTE is a national broadcaster in Ireland. For more information on RTE documentary 'In from the Margins' can be found on the Inclusive Music website. Available at: www.inclusivemusic.org.uk/about.

opportunities for people who can't use a conventional instrument to play and learn music - alone or with others' (SKUG, 2015). Anderson has also supported SoundOUT to enhance meaningful engagement for students wishing to progress their music making towards independent learning and composition. Anderson continues to develop the E-Scape software in response to needs and requests, and, in 2013, he added an integrated eye gaze control system. He is currently working with SoundOUT to adapt and develop this eye gaze system to ensure meaningful engagement in all aspects of composition and performance for the inclusive band members in this study, particularly for Cillian from Circles.

Tra la la Blip

Tra la la Blip is a group that has also been a huge inspiration to the development of Circles, Till 4 and Mish Mash in this study. They are an electronic music performance group based in New South Wales, Australia. This group includes composers and performers, with and without disabilities. Tra la la Blip was established in 2008 by Randolph Reimann, a music facilitator, producer, facilitator, sound artist and musician. The group was particularly inspirational in the development of Mish Mash. Tra la la Blip create, produce and perform original music and use a variety of DMIs, as well as analogue instruments. As a group they aim to develop 'new forms of musical expression that are accessible, experimental and most of all fun' (Reimann, 2012, p.80). Performance and recording is a core element of this band, along with collaborations with local artists. Tra la la Blip use technologies such as Tenori-on, Audio Cubes, Kaosillator and Soundbeam, some of which are currently used within

SoundOUT's inclusive music bands. Tra la la Blip work in a similar fashion to hip-hop and electro artists of the 70s and 80s, and embrace loop-based recording methods of improvisation. This approach informs the basis of their music production and performance. Improvisation is placed within a set of predetermined parameters. This is similar to Mish Mash using predetermined keys and scales. Reimann feels immediate feedback to performance was very important for meaningful engagement, particularly when working with people who have a disability. Reimann and Tra la la Blip have collaborated extensively with organisations and groups throughout Europe and the US. Steve Dillon, educator and researcher, collaborated with Tra la la Blip on exploring issues of meaningful engagement in creative music making practices using music technology. In the following section, I introduce Dillon's research in this area.

Meaningful Engagement

Dillon uses Csikszentmihalyi's 'flow' theory, to examine meaningful engagement in music education practices (Dillon, 2007). Csikszentmihalyi's 'flow' theory suggests that, if a task is too challenging, there is a danger of causing anxiety and, if it is not challenging enough, there is a potential for boredom. 'Flow' is where challenge and ability meet (Csikszentmihalyi, 1994, p.222). Dillon established that people, who found a balance of challenge in a music making and learning activity, combined with the capability to meet that challenge, feel 'flow' (Dillon, 2007, p.46). Csikszentmihalyi describes these 'flow' experiences as providing 'a sense of discovery, a creative feeling of transporting the person into a new reality' (Csikszentmihalyi, 1990, p.74). He

claimed that aesthetic activity provided a constant source of opportunity for ‘flow’ and identified that musicians and artists appeared to achieve ‘flow’ more frequently (Csikszentmihalyi, 1994). Dillon notes that these ‘flow’ experiences lead to meaningful engagement in music making and learning for music students (Dillon, 2007, p.48).

In 2002, Dillon joined forces with researcher and technologist, Andrew Brown,⁷³ to explore issues relating to meaningful engagement when using DMIs for creative music making and learning (Brown and Dillon, 2007). As part of this study, Brown and Dillon supported the design and development of the music software, Jam2Jam,⁷⁴ for children as part of their collaborative research. Two philosophical perspectives were applied when designing Jam2Jam: one concerning modes of creative engagement, which Brown examined in-depth prior to this study (Brown, 2001; Brown, 2003), while the other perspective relates to meaning making through music for children, which Dillon studied comprehensively, prior to this study (Dillon, 2001). These two strands of research were combined into a theory of meaningful engagement. This theory brings together Brown’s modes of creative engagement and Dillon’s research on meaning contexts. Brown suggests there are five modes of creative engagement

⁷³ Brown’s previous research focused on exploring how computer musicians engage with the act of creative production (Brown, 2001, 2003). He identified various relationships between technology and creativity and particularly focused upon the role of the composer in the production of creative sound.

⁷⁴ Jam2Jam is a collaborative audio-visual performance software that enables people to play music and carry out video mixing in groups. These groups can be within the one room or they can be connected over the internet. More information on Jam2Jam can be found on the exploding art website. Available at: <http://explodingart.com/jam2jam/jam2jam/Home/Home.html> [Accessed 7 July 2015].

in music making: Appreciating,⁷⁵ Evaluating,⁷⁶ Directing,⁷⁷ Exploring,⁷⁸ and Embodying⁷⁹ (Brown, 2015). Dillon draws from Csikszentmihalyi's four areas of meaning⁸⁰ to describe contexts in which meaning takes place through these modes of creative engagements (Dillon, 2007, p.84). The meaningful engagement theory suggests that meaning occurs in three contexts: with an individual, through social interactions, and with cultural and community engagement. Meaning occurs in a personal context when an individual feels intrinsic enjoyment of creative activities. Artistic relationships with others have the potential for meaning making in a social context, while meaningful engagement in a cultural context emerges from the feeling that a community values creative actions (Brown, 2015). In Figure 15, Dillon illustrates the three contexts in which this process of meaningful engagement through 'flow' takes place.

⁷⁵ Appreciating refers to, paying careful attention to creative works and analysing their representation. Available at: explodingart.com (Accessed: 7 July 2015).

⁷⁶ Evaluating refers to, judging aesthetic value and cultural appropriateness. Available at: explodingart.com (Accessed: 7 July 2015).

⁷⁷ Directing refers to, crafting creative outcomes and leading creative activities. Available at: explodingart.com (Accessed: 7 July 2015).

⁷⁸ Exploring refers to searching through artistic possibilities. Available at: explodingart.com (Accessed: 7 July 2015).

⁷⁹ Embodying refers to, being engrossed in fluent creative expression. Available at: explodingart.com (Accessed: 7 July 2015).

⁸⁰ 1. Within the needs of the organism; 2. Self-interest; 3. Community/family; and 4. Reflective individualism. The latter of these three contexts are used to inform the meaningful engagement theory.

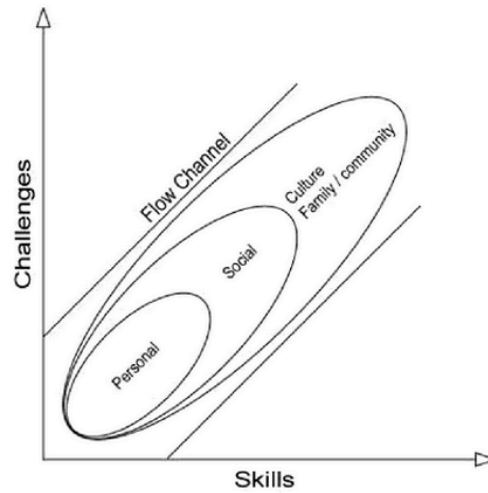


Figure 15: Meaning and Flow (Dillon, 2007, p.49)

Informed by this meaningful engagement theory, Dillon explores how music educators can facilitate and structure experiences, so that music students can gain access to meaningful engagement when using music technology (Dillon, 2007, p.49). He suggests that it is necessary to take into consideration three factors in order to create a music programmes that facilitates meaningful music making:

- An attention to the distinctiveness of the context;
- Attention to the modes of creative engagement;
- An examination of whether these clearly lead to personal, social and cultural meaning for the participants (Dillon, 2007).

To document the modes of creative engagement in diverse contexts, and to examine whether they lead to meaningful engagement, Dillon and Brown developed the Meaningful Engagement Matrix (MEM).

The Meaningful Engagement Matrix

This MEM is a framework that documents the relationship between ‘engagement in creative production and the potential that activity has for meaning’ (Dillon,

2007, p.84). It has two axes, the horizontal axis describes modes of creative engagement and the vertical axis refers to contexts in which this engagement takes place (Dillon, 2007, p.86). Figure 16 is an example of musical activities documented in the MEM. It can be used as a tool for documentation and analysis of the level of meaningful music engagement in multiple contexts. It highlights modes of engagement and/or motivating contexts in which learning takes place. It can identify the strengths and weaknesses of an approach and allows the facilitator or educator to respond, in order to enhance meaningful engagement. This information can inform the educator on how to develop and adapt activities in order to enhance meaningful engagement in any particular context (Brown, 2015). Brown and Dillon suggest that a full musical life involves experiences in each cell of the Matrix (Brown and Dillon, 2007).

	Appreciating	Evaluating	Directing	Exploring	Embodying
Personal	Listen, Read, Watch	Analyze, Select	Compose, Produce	Improvise, Experiment, Investigate	Practice, Play
Social	Share, Recommend	Discuss, Comment	Conduct, Lead, Instruct	Jam	Rehearse, Record
Cultural	Attend, Patronize	Curate, Review	Promote, Manage	Research, Publish	Perform

Figure 16: Meaningful Engagement Matrix (MEM) with example of musical activities (Brown, 2015)

Chapter Reflections

Technology has created a new musical landscape, one that is influencing how we hear, play and teach music (Criswell, 2011). The research on the use of DMIs in

diverse music making and learning contexts presented in this chapter, highlights how vital technology is, or should be, within broader music and music education practices (Himonides, 2012).

I integrated a wide range of DMIs into all three of the inclusive bands in this study. Learning from international models of good practice, I incorporated DMIs such as Soundbeam, iPads, the Magic Flute and the EyeHarp. I made these DMIs available to each of the three inclusive bands, in order to provide access to active music making and learning for individuals who were previously marginalised. Some of the DMIs I used in this study incorporate less tactile mechanisms of gesture-based interactivity. For example, Soundbeam uses sensors to capture movement, without the need for physical contact between performer and instrument. When choosing a DMI to accommodate the needs and movement capabilities of each player, I considered Ramstein's three approaches to gestural analysis. Music performed using DMIs in each of the inclusive bands encapsulates a wide range of gestures; for example, Cillian from Circles performs music using a pressure switch, with minimal head movements, as well as using his foot to trigger notes sequences in a movement sensor with his foot. I undertook ongoing gestural analysis with DMI players in each of the inclusive bands. I discovered that this process was necessary to ensure that interaction with the DMI offers meaningful engagement and 'flow' in the music making and learning process for all players (Ramstein, 1991, in Wanderley and Miranda, 2006). The flexible and adaptable nature of each of the DMIs used in this study, led me to incorporate them in diverse ways in each of the inclusive bands.

Through this study, I aim to contribute new knowledge on the use of DMIs

for meaningful music making and learning and inspire music educators to use DMIs to ensure universal access within their practice. Throughout this research process, I documented the modes of creative engagement of DMI players and the diverse contexts for music making and learning which players found most meaningful, as presented in Brown and Dillon's MEM. This process enabled me to identify the most meaningful activities for band members and also to find areas that caused anxiety. This information allowed me to adapt and respond to the specific needs, values and ambitions of the bands members in order to enhance meaningful engagement, particularly when using DMIs.

Himonides advocates for music technology development to be viewed from a meta perspective. He suggests that 'technological humanity' and 'musical humanity' are continuously developing concurrently. Both on a philosophical and praxial level, it is difficult to determine where traditional approaches to music making end and technological enhances begin (Himonides, 2012, p.430). Perhaps, DMIs, currently considered innovative technological developments, will eventually become common musical instruments within music practices worldwide, thus, ultimately, making active music making accessible and normalised for people with physical disabilities. Through this study, I aim to initiate the normalisation of the use of DMIs for creative music making in Cork city.

In Chapter 4, I discuss three theories, The Rhizome Theory, The Capabilities Approach and Bronfenbrenner's Model of Social Ecology. These theories help further contextualise the use of DMIs within inclusive music making and learning environments, on a micro and macro level.

Chapter Four

Practice Methodology

Introduction

In this chapter I explore three theories - Bronfenbrenner's Model of Social Ecology (Bronfenbrenner, 1994), Deleuze and Guatarri's Rhizome Theory (Deleuze and Guatarri, 1987) and Sen's Capabilities Approach (Sen, 1999) - in order to facilitate new thinking for practice methodologies within the field of inclusive music making and learning. These theories have influenced, and have been useful in interpreting, the development of my inclusive practice in this study.

Bronfenbrenner states that 'in order to understand human development one must consider the entire ecological system in which growth occurs' (Bronfenbrenner, 1994, p.37). This perspective enables a focus on how occurrences within social and cultural contexts, can influence an individual's development. Similarly it facilitates an examination on how individual development can instigate further change within broader social and cultural contexts. Bronfenbrenner's Model of Social Ecology provides a framework to examine the partnerships, from a macro to a micro level, that led to the evolution of the three inclusive bands in this study. The aim of each band was to ensure activities were socially and culturally relevant to members. In line with Bronfenbrenner's model, the development of these bands took into consideration each participant's prior musical experience along with their socially

constructed⁸¹ values and ambitions.

Amartya Sen's Capabilities Approach provides a useful perspective to explore this person-centered process. The Capabilities Approach is based on the principle that freedom of choice and empowerment of individuals to achieve what they deem valuable in life, is of primary moral importance.⁸² Following the Capabilities Approach, the empowerment of each inclusive band member to achieve what he or she deems valuable within a music making and learning context was a key principle.⁸³

The progression route undertaken by each band member to achieve these valuable 'doings' and 'beings' resonates with 'lines of flight' proposed by Deleuze and Guatarri's in their Rhizome Theory (Deleuze and Guatarri, 1987). This theory aims to provide an alternative way to understand the acquisition of knowledge. Based on six core principles, Deleuze and Guatarri suggest flexible and multiple approaches to learning in order to facilitate unique progression routes or 'lines of flight', which are meaningful for diverse learners. The Rhizome Theory facilitates an understanding of the adaptable structure and processes inherent in each of three inclusive bands in this study.

⁸¹ Social Constructivism is a sociological theory of knowledge that examines how social phenomena are constructed in social contexts. John Dewey could be considered to be philosophical founder of social constructivism through his work on democracy and learning (Dewey, 1910, 1916). Vygotsky (1978) is considered the founder of social constructivism and is one of the most influential theorists within the field. Within a music education context, a social constructivist theory assumes that music students are not given knowledge but construct their own meaning and values from their musical and social interactions with their peers and within their wider social and cultural contexts (Blair and Wiggins, 2010, p.21).

⁸² There are studies that challenge this approach and suggest that it is too vague to implement, however, the central ethos of empowering individuals with the freedom of choice, to achieve what they find valuable and meaningful within a music making and learning context, provides a useful perspective for this study.

⁸³ These musical ambitions are taken into consideration through a democratic process and achieved where resources are available.

This chapter is composed of three sections. In the first section I discuss Bronfenbrenner's Model of Social Ecology. I describe the five ecological subsystems in which development occurs. I also discuss research that utilises this ecological systems theory, in order to provide a perspective on educational change and inclusive education development. In the second section, I introduce Sen's Capabilities Approach and discuss the literature that explores its application within educational contexts. In the final section I introduce the Rhizome Theory as a perspective to understand the adaptable disposition of the three inclusive bands. I present the Rhizome Theory's six principles for learning along with recent research that employs this theory in examinations of meaningful music development in music education contexts.

A Model of Social Ecology

Bronfenbrenner's ecological systems theory emerged in the 1970s as a new perspective on child development.⁸⁴ The theory emphasises the role of the environment and society on development (Bronfenbrenner, 1974, 1976, 1977). Based upon Lewin's theory of psychological fields, Bronfenbrenner professes that the ecological system in which we exist is composed of five socially arranged subsystems that influence and support personal growth (Bronfenbrenner, 1977; Lewin, 1917, 1931, 1935). He explored how development occurs within a multitude of different, but nested and related systems (Bronfenbrenner, 1994, p.37). This theory enables a focus on individual

⁸⁴ Since the 1970s, there has been an increase in discourse on human development and its relationship to the environment in which one lives (Bronfenbrenner, 1994, p.37).

experiences while simultaneously taking into consideration the socio-cultural context of these experiences. It is ‘expansive, yet focused’ (Leonard, 2011, p.990). In the following section I introduce Bronfenbrenner’s five ecological sub systems: microsystem, mesosystem, exosystem, macrosystem and chronosystem. Figure 17 provides a visual example of this Model of Social Ecology, to support these introductions.

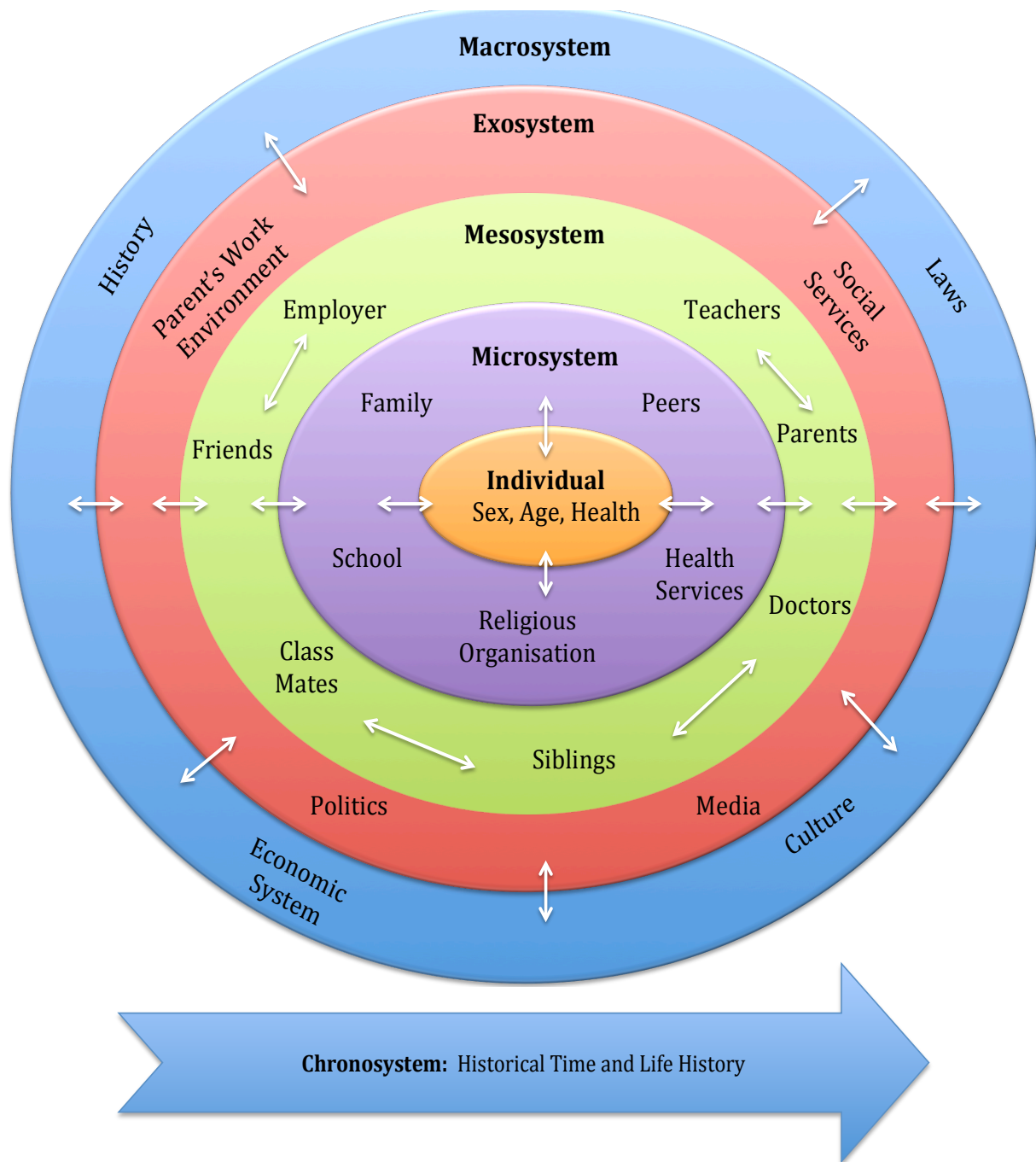


Figure 17: Bronfenbrenner's Model of Social Ecology

Ecological Subsystems

Microsystem

The central social system of Bronfenbrenner's model is called the microsystem,

wherein the developing individual has direct face-to-face interactions with significant people in his/her life, such as parents, friends, teachers, work colleagues and mentors. Within social sciences, significant research has taken place into the nature and structure of Bronfenbrenner's microsystem. Many studies have focused on the interactions with family (Bronfenbrenner, 1986; 1986a; 1988, 1989). There have also been studies that explore schools and classrooms as developmental settings (Stigler, 1992; Ceci, 1990). This research reveals that in Bronfenbrenner's microsystem the individual has direct interactions with physical, social and symbolic features within that environment. These features may 'invite, permit or inhibit engagement' which can hinder or support human development (Bronfenbrenner, 1994, p.39). The microsystem is where individuals live their daily lives, and its organisational structure has a significant influence on an individual's development, including their social and educational development.

Mesosystem

The next outer layer of Bronfenbrenner's ecological system is called the mesosystem: 'A mesosystem is a system of microsystems' (Bronfenbrenner, 1994, p.40). In an educational context a mesosystem involves interactions and relationships being developed between the people in the microsystem⁸⁵; for example, parents interact with teachers and friends interact with parents. These lateral connections do not directly involve the individual (Leonard, 2011). In 1983, Epstein undertook research that used Bronfenbrenner's model of social

⁸⁵ These individuals interact with the developing individual on a daily basis.

ecology to examine the developmental impact of communication and participation in decision-making, by parents and teachers, on a child (Epstein, 1983, 1983a). This research highlighted that pupils, whose parents were involved in decision making with teachers, were more independent, took more initiative, and were receiving higher grades in assessments. Epstein's study suggests that these decision-making processes within the mesosystem had a positive impact upon human development (*ibid*). In 1988, Boyatzis explored the role of culture on human development and education, with specific focus on home school relations. He affirms that an individual's interaction and development within microsystems and mesosystems are influenced by larger cultural contexts - exosystems, macrosystems and chronsystems, which are discussed below (Boyatzis, 1988).

Exosystem

The outer layer beyond the mesosystem is called the exosystem (Bronfenbrenner, 1994, p.25). This exosystem involves people and spaces that are not directly involved in the individual's development on a daily basis, including, for instance, a school's board of management and funding bodies⁸⁶ (*ibid*). This system consists of relationships and interactions that take place between one or more people or spaces, in a manner similar to the mesosystem. Unlike the mesosystem, these spaces, groups or individuals, do not have direct interaction with the developing individuals. However, they may indirectly impact the individual's

⁸⁶ For example administrative or funding decisions relating to the support of service for individuals with disabilities indirectly impacts an individual with disabilities.

development for example the development of policies and/or funding priorities from a local arts council.

Macrosystem

Bronfenbrenner describes the outermost layer of his model as the macrosystem. It is within this system that the predominant political, social, cultural and economic ideologies and conditions of the society exist (*ibid*). It could be described as a type of overarching pattern that influences elements and characteristics in the micro, meso and exo systems, including, for example, belief systems, bodies of knowledge, customs and laws. The macrosystem has been described by Bronfenbrenner as a type of societal blueprint for a particular culture (*ibid*). He proposes that it is necessary to gain a deeper understanding of the social and psychological features that exist within the macrosystem, in order to gain an understanding of the particular conditions and processes that affect experiences and perceptions within the microsystems (Bronfenbrenner, 1986, 1986a, 1988).

Chronosystem

The chronosystem refers to a period of time in which all of these nested relationships between these interrelating systems are situated. The presence of the chronosystem in this model of ecology affirms that the development in each of the four other subsystems are characteristic of the ideologies within a specific time frame and shift accordingly (Leonard, 2011, p.990). Bronfenbrenner refers to this process as the chronosystem. For example the chronosystem for the inclusive bands in this study is between 2011 and 2014.

Ecological Systems Theory and Educational Change

These five subsystems described above are dynamic, and segregating them independently is inadequate for capturing the complexity of the individual's experience and perceptions (Singal, 2006, p.240). In 2001, Fullan examines Bronfenbrenner's Model of Social Ecology as a potential framework to explore the interconnectedness of the different subsystems in the process of educational change, for example, the level of change taking place on a governmental level, in schools and in classrooms (Fullan, 2001).

To date, no studies of inclusive music education in Ireland have implemented Bronfenbrenner's Model of Social Ecology. However, there is an emerging ecological discourse on the factors that affect the development of inclusive education internationally (Stofile, 2008; Singal, 2006). In 2006, Niddhi Singal used the ecological systems model to gain an understanding of inclusive education in India. He specifically focused explorations on the influences and impact of international and national socio-cultural factors on microsystems within an inclusive education environment in India (Singal, 2006 p.239). Singal proposes that Bronfenbrenner's model enables an examination of inclusive education on a systemic level, as well as on an individual level. He outlines that this approach takes into consideration beliefs and value systems, as well as political viewpoints (*ibid*). This model is useful to explore the impact of the inclusive music practice in this study on both an individual as well as on a broader social and cultural level.

When developing the person-centred process in each of the three inclusive bands in this study I was directly influenced by the Capabilities Approach. In the

following section I describe the core concepts of the Capabilities Approach, along with related educational research.

The Capabilities Approach

The Capabilities Approach was developed by Amartya Sen in the 1980s as an alternative method to assess well-being, in order to enhance human development (Sen, 1999).⁸⁷ According to Sen, the ‘capabilities’ of an individual refers to what ‘he/she is able to do and desires to be and do’ (*ibid*). This approach also takes into consideration obstacles that prevent an individual achieving such ‘capabilities’. Human dignity and the celebration of diversity are placed at the core of the Capability Approach. It rejects utilitarianism⁸⁸ and is grounded in human diversity. According to Terzi, adopting the Capabilities Approach has been effective in addressing issues of injustices in educational and social environments (Terzi, 2005). Adopting this viewpoint focuses on people’s freedom of choice to achieve what they deem valuable. It is also useful when examining inequality in music education (Tonson et al., 2013, p.492).

Martha Nussbaum and Amartya Sen are the most prominent theorists of the Capabilities Approach. Both advocate for consideration of individual ‘capabilities’, however, they have differing opinions on how ‘capabilities’ should be prioritised (Nussbaum, 2000; Sen, 1992). Sen emphasises that ‘capabilities’ should be ranked by a democratic process, which takes into consideration the

⁸⁷ This approach was created as an alternative to understanding well-being solely in economic terms.

⁸⁸ Utilitarian is an ethical theory that refers to a moral action that maximises utility i.e. the greatest good for the greater number. Utility is understood in various ways such as happiness, lack of suffering and well-being.

views and values of the individual (Sen, 1992, 1999). Building on Sen's initial development of the Capabilities Approach, Nussbaum created a list of ten 'essential capabilities'⁸⁹ (Nussbaum, 2000). She argues that these ten 'essential capabilities' are the core of a well-being assessment.

In my research I draw inspiration primarily from Sen's interpretations of the Capabilities Approach; it has enabled me to take into consideration the views, values and ambitions of each band member of the inclusive bands. In the following section I introduce the key concepts that constitute Sen's Capabilities Approach.

Key concepts of the Capabilities Approach

Sen describes the application of the Capabilities Approach as an assessment of well-being, resulting in an evaluation of a person's freedom to choose a life that he/she has reason to value (Sen, 1999). There are four core tenets of this approach: 'functionings', 'capabilities', 'agency' and 'freedom'.

Functionings

Sen describes 'functionings' as 'an achievement of a person: what he or she manages to do or to be' (Sen, 1999, p.7). A person's 'doings' and 'beings' include, for example, eating, sleeping, and making music. Sen distinguishes between various types of 'functionings'. Some are primary 'functionings', such as being well nourished and having good health, which may be valued by all in

⁸⁹ Nussbaum's 10 essential capabilities are: Life; Bodily Health; Bodily integrity; Senses, Imagination and Thought; Emotions; Practical Reason; Affiliation; Other Species; Play; and Control over one's Environment (Nussbaum, 2000).

society. He also refers to other ‘functionings’, which are more complex, yet still generally valued in society; these include, for example, achieving self-respect, being happy and being socially included in society. Individuals place diverse values on these ‘functionings’, which can vary significantly from person to person. Sen claims that a combination of these ‘functionings’ make up a person’s well being (Sen, 1992. p.31). Music making is a ‘functioning’ that is valued by some people in society, including many people with disabilities. An individual’s freedom to achieve this ‘functioning’ can be impacted by social, economic, political and cultural contexts. This resonates with Bronfenbrenner’s concept of the wider systems such as the macro, exo and meso systems, having an impact on the development and experiences of an individual within the microsystem.

Capabilities

According to Sen, ‘capabilities’ are a person’s ability to achieve a variety of valuable ‘functionings’ and their ability / freedom to choose between them. (Sen, 1992. p.81). ‘Functionings’ reflect actual achievements while ‘capability’ represents a freedom⁹⁰ to choose between them. (Sen, 1999, p.75). For Sen, ‘capability’ means ‘a certain sort of possibility or opportunity for functioning’ in life. (Crocker, 1995, p.162). It refers to an individual’s freedom to lead a life that is valuable to them (Sen, 1992, p.40). The difference between a valuable function and a ‘capability’ is similar to the difference between an outcome and an opportunity (Robeyns, 2002, p.63) Music making is a ‘functioning’. Having the freedom to choose to play music is a ‘capability’.

⁹⁰ Freedom in this context refers to an individual having the opportunity to achieve what they deem valuable.

Freedom

An individual's 'capability' is their 'freedom to achieve valuable 'functionings' (Sen, 1992, p.49). Sen suggests that the provision for freedom of choice is central to the Capabilities Approach. The freedom to choose 'functionings' is a means of empowerment. It facilitates a person's freedom to achieve well-being. Expanding freedom of choice expands valuable 'functions' and, subsequently, 'capabilities', however, it depends on social, political and cultural contexts (Alkire and Deneulin, 2009). In order to explain the difference between 'functionings' and 'capabilities', Sen provides an analogy of a person starving and a person fasting. The person starving is deprived of the 'capability'; they do not have the freedom to choose to eat or not. The person fasting has a choice and, therefore, does have the relevant 'capability' (Terzi, 2005). It is crucial to consider whether the individual is personally choosing not to eat or whether the person cannot eat because they lack the means to acquire a sufficient amount of food. (Sen, 1985, pp.203-209). In relation to music making, a person who has the freedom to choose to make music, but decides not to, has the relevant 'capability', whereas a person who does not have the opportunity to make music due to physical, or other, barriers, is denied that 'capability'.

Agency

Sen describes an agent as an individual who has the freedom to choose what he/she values in life. Human diversity means that we all have different socially constructed conceptions of good and what is necessary for a good life, resulting in individuals having diverse values. A utilitarian notion of value and good is a

‘narrow view of human beings’ (Sen, 1985, p.4). Traditionally, well-being was assessed from an economic perspective, with assessment based on utilitarian measures of income, possessions and resources. Sen rejects this approach, considering it an inadequate means of assessing individual well-being (Sen, 1987, p.16). Possessions are not useful in themselves, only for what they can do for people, and people do not have equal abilities to make equal use of possessions. Sen illustrates this point using the analogy of a bicycle. If a person cannot ride a bike, then it is not of equal value to that individual as it is to someone who can ride a bike. Watts and Ridley applies this reasoning to musical instruments, arguing that a musician with profound physical disabilities will not value a conventional musical instrument as much as a musician without a physical disability (Watts and Ridley, 2007 p.153). The mere possession of goods cannot be an indicator of well-being (Sen, 1987, p.15). Personal and social characteristics influence the conversion of goods (guitar) into valuable ‘functionings’ (music making) (Sen, 1999, pp.70–71).

Sen promotes five areas of focus, which he considers necessary when assessing ‘capabilities’ (Sen 1999):

1. The importance of real freedoms in the assessment of a person's advantage;
2. Individual differences in the ability to transform resources into valuable activities;
3. The multi-variant nature of activities giving rise to happiness;
4. A balance of materialistic and non-materialistic factors in evaluating human welfare;
5. Concern for the distribution of opportunities within society

When undertaking a ‘capability’ assessment, it is necessary to know in-depth details about a person and their circumstances to ascertain meaningful engagement and well-being in various contexts (Robeyns, 2000, pp.5-6).

The Capabilities Approach is now a dominant paradigm for human policy development internationally. Its aim is ‘to achieve outcomes that [people] value and have reason to value’ (Sen, 1999, p.291). Drawing on theoretical insights from Aristotle and Kant, Sen’s Capabilities Approach emerged from the fundamental principle that all human dignity is of value, incomparable quality and unconditional worth (Kant, 1998, p.87). Sen stresses that the Capabilities Approach is adaptable and flexible enough to accommodate diverse contexts, but that it is difficult to apply empirically due to its subjectivity (Sen, 1980, 1992, 1999, 2002 and 2009). He supports this ambiguity as it reflects and respects the freedom and the difference between people and their socially constructed values (Sen, 1993, pp.33-34). He calls this ‘the fundamental reason for incompleteness’ (Sen, 1992, p.49). Robeyns agrees with Sen’s refusal to focus on predefined ‘capabilities’, as she feels it is important that the individuals themselves have a choice of which ‘capabilities’ to focus upon, for example music making and learning (Robeyns, 2005).

In the next section I discuss research that explores the application of the Capabilities Approach in educational contexts.

Capabilities Approach and Education

The Capabilities Approach has become a significant philosophical theory within

many scholarly fields⁹¹ including education. It has been used as a framework to understand that a person's dignity and capacity to achieve a meaningful life should be central consideration in societal development (Tonson et al., 2013, p.490). The concept of 'capability' in education 'can assist in identifying learning that not only yields knowledge, but also yields knowledge that is worthwhile to one's own life functioning' (Hinchliffe, 2007, p.225). The application of the Capabilities Approach in educational contexts increases an individual's chances of leading a meaningful life both inside and beyond the classroom (Tonson et al., 2013, p.493). Tonson argues that the Capabilities Approach is a promising approach for rethinking the social justice agenda within educational provision (Tonson et al., 2013, p.491). His work is focused on the application of the Capabilities Approach to the educational development of students with disabilities. Tonson suggests that adopting a capabilities perspective, that evaluates an individual's freedom to live a meaningful life, enhances the 'democratic and socially just educational entitlements' of people with disabilities (Tonson et al., 2013, p.492).

There have, however, been criticisms of the application of the Capabilities Approach within the field of inclusive education. Julie Allan and Sheila Riddell suggest that an overemphasis on individualistic approaches may reinforce social inequalities (Riddell, 2009, p.287). Allan argues that 'a fragmentation of provision threatens to undermine inclusion' with 'individualisation and the continuation of special needs provision, discouraging approaches to inclusive practice, which are about all children' (Allan, 2010, p.206). Hedge and

⁹¹ The Capabilities Approach emerged initially as a theory within welfare economics

Mackenzie, respond to Allan and Riddell's perspectives by suggesting that inclusion and, subsequently, meaningful engagement, are all relative to what an individual has the freedom to do and be within certain political and social contexts (Hedge and MacKenzie, 2012).

According to Nussbaum, the central goal of the Capabilities Approach is to ensure that all students 'are equally placed in the education process, and equally supported' (Nussbaum, 2009, pp.342-343). The Capabilities Approach is 'concerned with entrenched social injustice and inequality, especially 'capability' failures that are the result of discrimination or marginalisation' (Nussbaum, 2011, p.19). To address these inequalities and injustices, Nussbaum argues that it is necessary to provide equal access to education opportunities and outcomes. Nussbaum emphasises that if all children are to be provided with equal opportunities to realise their 'capabilities', there needs to be a clarification of what equality and inclusion means (Hedge and MacKenzie, 2012, p.331). Nussbaum questions the all-encompassing attitude to mainstreaming in education contexts and advocates for students having the option to attend segregated special education settings, if equality of educational opportunity and outcomes are to be realised. She argues that inclusion in mainstream education settings doesn't always necessitate meaningful inclusion. Within an inclusive education context, the Capabilities Approach enables a shift of focus from general inclusion practices to a more person-centered approach, which focuses on enhancing peoples' 'capabilities'. Applying the concepts of 'capabilities' and 'functioning' to inclusive education, simply knowing that a person with disabilities is included in mainstream classes, is not enough to know which

‘functionings’ he/she can achieve. Adopting the guiding principles for developing inclusive music environments, as presented by Jellison (Jellison, 2015), within a Universal Design for Learning framework, this study aims to enable individuals to achieve their ‘capabilities’ within inclusive settings, where engagement in meaningful music making is prioritised.

In the following section, I describe an evaluation by Watts and Ridley of the renowned Drake Music project. Watts and Ridley’s use the Capabilities Approach as a framework to examine the well-being of participants in the project, who are specifically, adults with disabilities using Digital Musical Instruments (DMIs) for music making.

Capabilities Approach, Music and Technology

Drake Music is a project that enables musicians with disabilities to make music using a range of DMIs. In 2007, Watts and Ridley used the Capabilities Approach as an analytic framework to understand how music making, using DMIs, enables the Drake musicians to develop and express their sense of self and how that relates to their sense of well-being. The researchers firstly identified the ‘functionings’ of the Drake musicians. Music making was a valuable functioning for all research respondents. Respondents emphasised the importance of participatory music making as opposed to music therapy.⁹² According to the research respondents, to consider their music as therapy would have undermined both their identities as musicians and the aesthetics of their music (Watts and

⁹² According to the Drake Musicians, music therapy is often assumed to be the most appropriate method of engagement for music making by people with disabilities (Watts and Ridley, 2007, p.150).

Ridley, 2007). They also insisted on the importance of engaging in original music making, as it provided an avenue for identity development; musical identities rather than disabled identities. They maintained that live performance was a significant aspect of music making for all Drake musicians. After determining what each member valued ‘doing’ and ‘being’, the researchers then considered their freedom to achieve those capabilities. They found that the musicians with disabilities, had limited freedom to achieve what they valued (music making). As the musicians have various physical disabilities, conventional musical instruments were not suitable for music making. They depended on Drake Music as a community organisation, to support their music making through DMIs, which were not accessible beyond the project for various reasons. Drake Music Project increased their well being by providing technology that enables them to achieve the things they valued in life. However, their freedom to achieve their valued outcomes through other means was extremely limited.

Watts and Ridley promote the use of the Capabilities Approach to understand the ‘functionings’ and ‘capabilities’ of people with disability.⁹³ In their study, they used the Capabilities Approach to deconstruct and reconstruct notions of disability. They suggest the approach takes into consideration both medical circumstances of individuals, along with challenging the social construction of disability. For example, in the Drake Music evaluation, the Capabilities Approach facilitated the support for the use of DMIs to ensure

⁹³ They emphasise the relevance of this approach to understanding freedom to achieve valuable doing and beings within the wider disability discourse. (Watts and Ridley, 2007).

individuals with limited movement have access to active music making while simultaneously challenging the notion that music therapy is the most appropriate method for people with disabilities to make music. Watts suggests that many organisations, such as Drake Music, are balancing issues between the biological and social construction of disability. In seeking to negotiate both, there must be provisions, such as adaptations or the use of DMIs, for those who are excluded from participation because of their impairments, yet there should not be so great a focus on the disability that the art is subsumed.

Both the medical and social model of disability⁹⁴ assumes a norm that disabled people are excluded from. The Capability Approach refutes this utilitarian notion of normality and celebrates human diversity. Watts and Ridley's short study highlights the Capabilities Approach as a framework that focuses on musicianship rather than solely on disability. To facilitate band members to achieve valuable 'functionings' in order to enhance their 'capabilities', I developed an open and adaptable framework for each of the three inclusive bands in order to accommodate all needs and abilities. In the following and final section of this chapter I introduce Deleuze and Guatarri's Rhizome Theory, which provides a useful perspective to explore this flexible framework.

The Rhizome Theory

French Philosophers, Gilles Deleuze and Felix Guatarri, developed the Rhizome Theory in 1987, where they challenged the meaning of knowledge and the means

⁹⁴ The medical model of disability has a focus on the limiting factors of individual impairments, while the social model of disability suggests that it is society that disables an individual through inaccessibility (Oliver, 1996).

of acquiring such knowledge. They argued that the mainstream understanding of knowledge is narrow, rigid and hierarchical, similar to a tree (Deleuze and Guatarri, 1987, p.12). Learning within this structure prioritises the transferring of knowledge through representation, which emphasises the repetition of facts, with little opportunity for variation (*ibid*). Deleuze and Guatarri advocated for the replacement of the tree structure as a model for knowledge with a Rhizome, which grows or moves in messy and unpredictable ways (Allan, 2011, p.155). A rhizome is a plant that is ‘a continuously growing horizontal underground, having a stem which puts out lateral shoots and adventitious roots at intervals’ (Oxford Dictionary Online, 2014).

Deleuze and Guatarri maintain that learning within a rigid tree like structure relies on the logic of binarism; for example, normal/abnormal or able/disabled. Hierarchical placement of abilities to represent such facts within this structure identifies those on the negative side of the binary, subsequently, suggesting there is a need for remediation and control of students who do not fit within this narrow structure (Allan, 2011, p.155). The use of the Rhizome Theory as an alternative view of the acquisition of knowledge would facilitate a more inclusive understanding of learning (Allan, 2011). In the following section I outline the six principles within the Rhizome Theory.

Principles of the Rhizome Theory:

Principles of ‘Connections and Heterogeneity’

The first two principles are ‘Connections and Heterogeneity’,⁹⁵ which insist that diverse connections and relationships are essential to the survival of the rhizome. ‘A rhizome can be connected to anything other, and must be’ (Deleuze and Guatarri, 1987, p.7). Within an educational context this ensures limitless opportunities for varied connections and non hierarchal or rigid relationships to support relevant and meaningful learning; ‘It is very different from a tree which plots a point – fixes an order.’ (*ibid*). The Rhizome ‘releases us from the false bondage of linear relationships’ (Roy, 2003, p.90).

Principle of ‘Multiplicity’

The third principle relates to ‘Multiplicity’. ‘There are no points or positions in a rhizome, such as those found in a structure, tree or root. There are only lines’ (Deleuze and Guatarri, 1987, p.8). According to Deleuze and Guattari, the Rhizomatic approach to learning consists of various ‘lines of flight’ or progression routes, which change and adapt to their conditions (Deleuze and Guatarri, 1987, p.9). These multiple lines connect in a non-hierarchical way and adapt to their environment, either by rupturing or creating new connections, when necessary (*ibid*).

⁹⁵ Heterogeneity is defined, as the ‘state of being diverse in character or content’ (Oxford Dictionary Online, 2014a).

Principle of ‘Asignifying Rupture’

‘A rhizome may be broken, shattered at a given spot, but it will start up again on one of its old lines, or on new lines’ (Deleuze and Guatarri, 1987, p.9). Deleuze uses the analogy of a swarm of ants to describe the adaptable and survivalist nature of the rhizome. He argues that you cannot fully destroy a swarm of ants, as ‘they form an animal rhizome that can rebound time and again after most of it has been destroyed’ (Deleuze and Guatarri, 1987, p.9). When applying this principle to learning, a rhizome perspective facilitates a learner to develop new connections and relationships in order to develop a new ‘line of flight’ that is meaningful, when one progression route or ‘line of flight’ is broken.

Principles of ‘Cartography and Decalcomania’

The final two principles of the Rhizome theory are the principles of ‘Cartography’⁹⁶ and Decalcomania’⁹⁷. Deleuze and Guatarri consider these the most important characteristics of the Rhizome Theory. These features present the Rhizome as a type of naturally evolving map, that responds to its environment, with multiple entry and exit points (Deleuze and Guatarri, 1987, p.13). The rhizome is always in process; either constructing, collapsing or reconstructing (Gregoriou, 2004, p.244). From a Rhizomatic perspective, learning is always in a state of change, never complete and is collaboratively worked on by all involved. According to Gregoriou, the rhizome is conceptually appealing, as it provides

⁹⁶ Cartography is the science or practice of drawing maps (Oxford Dictionary Online, 2014b).

⁹⁷ Decalcomania is an arts practice that involves the transferring of images or design using paint from one medium to another for example from glass to paper. The artist then perceives and traces patterns in the design that was naturally created by the coming together of the two mediums (Oxford Dictionary Online, 2014c).

various progression routes ('lines of flight') that are meaningful for all abilities when necessary.

Rhizome Theory and Music Education.

There have been a small number of studies that explore the Rhizome Theory in the context of music education. Gould, a prominent researcher within the field of music education, suggests that a rhizomatic perspective provides 'creative, artistic processes for understanding and changing the profession that match the values and goals of those teachers, students and communities who participate in it.' (Gould, 2011, p.132). She emphasises that the interconnectedness provided by a rhizomatic approach, ensures interconnected content, resulting in more diverse and meaningful learning experiences (Gould, 2011, p.137).

David Lines, a community musician and music educator in New Zealand, explores the use of the Rhizome Theory to understand music making and education outside of institutional settings (Lines, 2013, p.23). He particularly focuses upon the use of the Rhizome Theory to understand the rapidly changing urban digital music contexts in New Zealand. He advocates that Deleuze and Guattari's concept of the 'rhizome' is a way of thinking about and mapping music progression within informal settings as 'lines of flight' (Lines, 2013, p.24). According to Lines, the various 'lines of flight' represent 'meaningful connections sensations and becomings' (*ibid*). Lee Higgins, in his book '*Community Music Theory and Practice*', also advocates that the Rhizome Theory could provide an adaptable and open space that would support desires for

*Musiking*⁹⁸ within a community music context (Higgins, 2012, p.144).

Deleuze and Guatarri, along with other philosophers, such as Derrida and Foucault, have been recognised as ‘philosophers of difference’, due to their advocacy work for minority social groups, people with disabilities included. Their philosophies are based upon the acceptance of multiplicity; an acceptance of diversity (Allan, 2011, p.57; Patton, 2000). Goodley and Moore have also explored the potential of a rhizome perspective on the communicative use of the arts by people with disabilities (Goodley and Moore, 2002). Allan advocates that the use of the Rhizome Theory will provide an opportunity to rethink the social construction of learning disability, as well as imagine new forms of learning. She suggests this approach will provide a ‘different kind of sense making’ within the field of disability studies (Allan, 2011, p.153).

Chapter Reflections

To conclude this chapter, I outline some of the ways the theories discussed above have informed and supported an in-depth excavation of my inclusive practice. The combination of Sen’s Capabilities Approach, Deleuze’s Rhizome Theory, and Bronfenbrenner’s Model of Social Ecology, creates a multidisciplinary framework to explore the structural development and pedagogic process of the inclusive music bands in this study. Bronfenbrenner’s Model of Social Ecology is useful, as it enables a dual focus on individual experiences as participant in the inclusive bands, as well as on the wider socio-cultural context. Inspired by this

⁹⁸ Musiking is a term coined by Christopher Small to refer any act that is related to or involved in music performance. He advocated for the act of making music to be understood as a process (a verb) as opposed to an object (noun) (Small, 1998).

expansive perspective, from a macro to a micro level, this study aims to give voice to the experiences of inclusive music interactions in the micro and mesosystems, while contextualising them through the examinations of developments in the exo and macrosystems. The initial examination of experiences within the micro and mesosystems, led me to explore Sen's Capabilities Approach.

The Capabilities Approach provides a useful perspective to understand the person-centred and 'capability' focused approach present in each of the inclusive bands. The Capabilities Approach in this study facilitates a focus on enabling an individual to achieve what they desire to be and do within a music making and learning context, while taking into consideration the impact of impairment and societal factors. A shift of focus, from an evaluation of well-being by solely measuring the possession of goods, towards assessing valuable 'functionings', is crucial to an understanding of the Capabilities Approach and its relevance to this study. For example, just because a person with disabilities has access to a musical instrument doesn't necessarily mean they can make meaningful music. This perspective facilitated an exploration of how DMIs can be used and adapted to expand opportunities to achieve the functioning of meaningful music making, particularly for individuals with limited movement.

Underpinned by a core ethos of inclusivity and a celebration of diversity, each inclusive band in this study aimed to empower band members to follow their own 'line of flight' that they find valuable in order to facilitate meaningful engagement. The concept of the rhizome has been helpful in understanding the multiple progression routes ('lines of flight'), diverse relationships and

connections and the evolving structure of the three inclusive bands. The combination of these theories provides a new lens in which to examine inclusive music education: as a space for diversity where everyone belongs and movement and progression occurs.

In Chapter 5 of this thesis, I outline the research methodology undertaken to document the development of the inclusive music practice in this study.

Chapter Five

Research Methodology

Introduction

In this chapter I describe and defend the qualitative research methodology undertaken in this study. This approach enabled me to conduct an in-depth documentation and examination of the three inclusive bands in this study. I start this chapter by critically discussing the qualitative research methodology, along with the case study design, which incorporates elements of participatory action research methodology. I subsequently describe the related research methods used in this study, including, semi-structured interviews, video recording, ethnographic writing and participant observation. In this section, I also outline the process of access, ethical clearance and informed consent. In the final section of this chapter, I present the methods of triangulation used in this study, along with the various data analysis approaches, including the development of a case record. This case record provides the foundation for me to explore the experiences of participants with disabilities using Digital Musical Instruments (DMIs) to access meaningful and progressive music making within inclusive music bands, along with the conditions that led to this inclusive practice. This research project is concerned with describing the development of inclusive music practice and the subsequent experiences of students with disabilities using DMIs within these bands in such detail that any music teacher/student can identify him/herself and the settings explored in this study.

Qualitative Research Methodology

The methodology for this study is qualitative, as I deemed it the most suitable to capture the intricacies of both the inclusive practice and the experiences within the three inclusive music bands. Qualitative research refers to an approach that emphasises highly contextual description of people and events. It provides a space where an interpretation of both emic (those of research participants) and etic issues (those of writer) are represented (Bresler and Stake, 2006, p.271). A core aim of qualitative research is to explore multiple aspects of a phenomenon (Cormack, 1991). I felt quantitative research methods would not be sufficient to collect the data necessary to understand the phenomenon of my inclusive music practice in this study.

The use of qualitative research has traditions in psychology, as well as within the social sciences (Flick, 2002, p.7), and is increasingly emerging within education research in recent decades (Bresler, 1995, p.4). Traditionally, music education research was dominated by quantitative research methodologies, however, the 1960s witnessed an increase of qualitative approaches in the field (Bresler and Stake, 2006 p.279). Qualitative research methodology emerged from the philosophical thinking of Immanuel Kant (Bresler and Stake, 2006, p.272). Kant argued that we ‘sense, interpret and explain’ the world to ourselves (*ibid*). The aim of qualitative study is not to discover reality, as this is deemed impossible by its philosophical foundations. It is to construct a ‘clearer experiential memory and to help people obtain a more sophisticated account of things’ (Bresler and Stake, 2006, p.273). Key elements of qualitative research methodology resonate with social constructivist ideologies, which are also a

philosophical foundation for this study (Bresler, 1995).⁹⁹

Sociologists, Dilthey (1900) and Weber (1909), were the forerunners in the development of qualitative approaches to research methodology (Bresler and Stake, 2006, p.272). They challenged a positivist point of view, which advocates researchers to hold a neutral position within the research activity. Dilthey and Weber argue that the researcher is both the subject and the object of inquiry. They suggest that ‘the subject matter concerns the product of human minds and as such is inseparably connected to our minds, bringing along all our subjectivities, cognitions, emotions and value’ (Bresler and Stake, 2006, pp.276-227). My role as participant observer in all of the three inclusive bands in this study reflected this position.

Qualitative researchers have an interest in the uniqueness of individual cases. They advocate a variety of perspectives, including the researchers, which give voice to diverse perceptions (Bresler and Stake, 2006, p.277). According to Flick, the essential features of qualitative research include a variety of appropriate methods and theories, analysis of multiple perspectives and researchers’ reflective practice (Flick, 2002, p.4). There is a strong emphasis on ‘thick’ description¹⁰⁰ and interpretation, as well as the inclusion of ‘emic’ and ‘etic’ perspectives (Geertz, 1973; Lincoln and Guba, 1985). I found value in a qualitative methodology for this study, as it ‘demands extra attention to physical,

⁹⁹ The social constructivist ideologies that underpin qualitative research methodology and, subsequently, this study, refer to the concept that an individual constructs knowledge and his / her experiences through social interactions (Piaget, 1967).

¹⁰⁰ Thick Description is a term used by anthropologist, Clifford Geertz, to describe in-depth commentary and interpretation of an environment, which includes many details (Geertz, 1973, p.314).

temporal, historical, social, political, economic and aesthetic contexts’ from an ‘emic’ and ‘etic’ perspectives (Bresler and Stake, 2006, p.273).

Qualitative research may examine multiple situations in close proximity, however, this methodology does not force comparisons (Bresler and Stake, 2006, p.278). It seeks to understand a social learning situation bound in space and time. Bresler and Stake describe qualitative research as holistic, empirical, descriptive and interpretive. They also stress that qualitative research is emphatic and often emerges from the grassroots level. A key characteristic of qualitative research, according to Bresler and Stake, is that observations and interpretations are validated through triangulation¹⁰¹ (*ibid*).

Stake suggests that many researchers who undertake qualitative research often emerge from an emphatic or advocacy viewpoint, which may interfere with the research, as it could weaken scepticism. However, he suggests a balance is important, as ‘too much commitment to change or too much scepticism, across the community, will crimp the scope and zest of research’ (Stake, 2010, p.16). Throughout my role as researcher, I was actively aware of keeping this balance throughout this study, as I was part of the community of practitioners who developed and advocated for inclusive music practice in Cork city. I also took into consideration assumptions presented by Merriam when undertaking this qualitative study. These assumptions included a focus on process rather than product; a strong interest in experience and meaning; and immersive fieldwork that is descriptive and interpretative (Merriam, 1988, pp.19-20). As part of this

¹⁰¹ Triangulation is a process that employs multiple research methods to examine the same phenomenon as a way of increasing confidence in a finding (Yin, 2009).

qualitative methodology, I undertook a case study design to explore the inclusive practice in this study.

Case Study Design

Case studies have become a cornerstone of the qualitative research methodology. This study implements a multiple-case study design,¹⁰² which included the development and examination of three inclusive music bands in Cork city. Multiple case studies enable an in-depth exploration of social phenomena in diverse contexts (Hsieh and Shannon, 2005, p.111). Rapid social change, for example, the evolution of inclusive music practice in Cork city, is impacting on the diversification of society, which confronts researchers with new social contexts and perspectives, which can be examined using case studies (Flick, 2002, p.2). According to Yin, a case study is ‘an empirical inquiry that investigates a contemporary phenomenon within its real-life context’ (Yin, 2003, p.13). A case study involves data from multiple sources, which enables an in-depth exploration of a social phenomenon, accommodating the complexity and diversity that exists in real life cases. The case studies presented in this thesis involved data collection, not only from the band members with disabilities, but also from other band members, families and other stakeholders who interacted with these bands either directly or indirectly. Yin suggests case studies can be used to describe a real-life intervention, the context in which it has occurred and the complex causal links of such an intervention (Yin, 1994).

¹⁰² Case studies can be single or multiple designs. Single cases are used to confirm or challenge a theory or to present a unique case. Multiple case studies follow replication logic.

I chose to adopt a multiple case study research design in this study, as I wanted to understand, in-depth, a real-life social phenomena within multiple settings, namely, inclusive music bands that integrate DMIs within formal and informal settings in Cork city. I also felt it was important to understand this phenomena within contextual conditions, as advocated by Yin and Davis (Yin and Davis, 2007). Multiple case studies strengthen research findings in the same way that multiple experiments strengthen experimental research findings (Yin, 1994, p.31). A case study is not simply the study of an individual or group; it is used to describe a specific period of time, a context, a set of events, a process or a programme (O'Hanlon, 2003, p.77). It involves the collection of information using a variety of methods over a period of time (Merriam, 1988; Yin, 1989).

Within this qualitative case study framework, I also undertook participatory action research, as the research participants in this study were actively involved in developing the inclusive music practice for the communities in which they now exist. In the following section, I introduce participatory action research key concepts and processes that I utilised in this study.

Participatory Action Research

Participatory action research is a form of action research, which is a recurring process of planning, acting, observing, evaluating and reflecting (Mills, 2003). In 1946, Kurt Lewin, a social psychologist, was the first to instigate this action research movement in various disciplines, through the promotion of a cyclical reflective process for research purposes (Kemmis and McTaggart, 2005, p.272). This approach inspired the development of an action research process within

education settings, mainly in the US (Corey, 1949, 1953). It subsequently became associated with ‘critical and emancipatory action research’ (Carr and Kemmis, 1986). As a result, connections between action-research practices and social movements in the developing world were established. Prominent researchers, such as Paolo Freire,¹⁰³ championed these connections within the field of community development and education studies (Kemmis and McTaggart, 2005, p.273).

There are three underpinning principles in participatory action research, including ‘shared ownership of research projects, community-based analysis of social problems, and an orientation towards community action’ (Kemmis and McTaggart, 2005, p.273). This research methodology recommends that the communities, which are under study, actively participate throughout the research process (Whyte, 1991, p.20). Emerging from action research processes, participatory action research also involves a cyclical process that embeds self-reflection. This process includes planning a change; acting and observing the process, and consequences of the change; reflecting on these processes and consequences; re-planning; acting and observing again and reflecting again and so on (Kemmis and McTaggart, 2007, p. 563). Each of these steps are undertaken in collaboration with research participants. These cyclical, collaborative and reflective elements were significant in the development of the inclusive music bands in this study.

Participatory action research involves actual practices of people in a

¹⁰³ Paolo Freire was a Brazilian educator and philosopher who became a leading advocate for critical pedagogy. His best known work is ‘Pedagogy of the Oppressed’ (Freire, 1970).

particular place as opposed to abstract practices. Participatory action researchers are interested in changing practices in ‘the here and now’ (Kemmis and McTaggart, 2005, p.277). This study emerges from a social constructivist viewpoint, in that social and educational practices are socially constructed and, through the participatory action research process, it is possible to transform the exclusionary practices that are being produced by society (Kemmis and McTaggart, 2005, p.279). This study recognised the inequality of access to meaningful music making and learning opportunities for people with disabilities. As part of a case study design, which includes participatory action research to develop three inclusive music bands, this study aims to initiate change in educational theory and practice in order to contribute to a more inclusive and equitable music education system in Ireland.

Case Study - Strengths and Weaknesses

According to Yin, case studies are amongst the hardest types of research to do (Yin, 2003, p.58). He suggests that case study research requires a researcher to have certain qualities and skills including initiative, pragmatism, ability to take advantage of unexpected opportunities, optimism and persistence in the face of difficulties and unexpected events (Yin, 1994, p.55). The strengths and weaknesses of case study design are outlined below, as presented by Wellington in his book, *Educational Research: Contemporary Issues and Practical Approaches* (2000).

Strengths	Weaknesses
Case Studies should be...	Case Studies may not be...
Illustrative	Generalisable
Illuminating/insightful	Representative
Disseminable, accessible	Typical
Attention-holding	Replicable
Strong on reality, vivid	Repeatable
Of value in teaching	

Table 1: Case Study Strengths and Weaknesses (Wellington, 2000, p.97)

Hodkinson et al. emphasises that case studies are grounded in lived theory. He suggests that this form of research is strongest when researcher expertise and intuition are maximised, but he highlights that this process may raise doubts about the ‘objectivity’ of the research (Hodkinson and Hodkinson, 2001, p.10).

Case Study Protocol

Yin suggests that a case study protocol is essential when conducting multiple case studies (Yin, 2009, p. 79). It encompasses questions, which are aimed at ensuring the study is kept on target in order to address the research questions of the study. Yin presents a case study protocol as including an overview of the case study project; an outline of field procedures; case study questions and a guide for the case study report (Yin, 2009, p.81). Following this protocol, it is a way of increasing the reliability of case study research. When choosing a case study design to conduct this study, I addressed three areas of concerns, as proposed by Wellington. He suggests that the use of case study research may be problematic if issues of generalisability and validity are not addressed (Wellington, 2000, p.97).

Generalisability is a prominent issue in case study methodology (Kennedy, 1979). This mainly concerns single cases, as it is not possible to generalise with an individual case. Jensen and Rogers suggest that ‘when case studies are considered cumulatively, a wider variety of special conditions can be recognised to ascertain whether the findings are generalizable’ (Jensen and Rodgers, 2001, p.236). Firestone suggests that useful generalisations in qualitative studies are not analysed ‘sample to population’ (Firestone, 1993, cited in Miles and Huberman 1994, p.28). Yin reflects this argument by emphasising that case studies are most ‘generalizable to theoretical propositions and not to populations’ (Yin, 2003). He emphasises that in doing a case study ‘your goal will be to expand and generalise theories (analytic generalisation) and not to enumerate frequencies (statistical generalisation)’ (Yin, 2003, p.10). Walsham identifies four possible types of generalisations: the development of concepts; the generation of theory; drawing of specific implications, and contribution of rich insight (Walsham, 1995).

Within the context of this study, I gained inspiration from Deleuze and Guatarri’s Rhizome Theory, Sen’s Capabilities Approach, and Bronfenbrenner’s Model of Social Ecology, to make some generalisations about the development of inclusive music practice and the use of DMIs to enhance meaningful music making and learning for students with profound physical disabilities. I also took into consideration Stake’s suggestion that, when commitment to generalisability is too overpowering, important complex features of the research are in danger of being neglected (Stake, 1994). I aimed for a balance between openness to diversity and strive for generalisability in order to contribute to further learning

and research within the area of inclusive music practice in Ireland.

Reliability and validity are also recurring issues within the realm of case study methodology (Yin, 1989). Four tests have been used to establish quality in empirical social research: construct validity; internal validity; external validity, and reliability (Kidder and Judd, 1986, pp.26-29). Construct validity refers to the extent to which a study investigates what it claims to investigate i.e. to the extent to which a procedure leads to an accurate observation or reality (Denzin and Lincoln, 1994). Internal validity refers to whether what is observed is tainted by interpretation or is authentic. External validity refers to the extent to which observations and measurements can be generalised and to what extent they can be replicated in other situations. Reliability refers to the extent to which the evidence can be trusted. I was continuously aware of these issues during this study. Yin suggests three tactics to address these reliability and validity tests. These tactics include using multiple sources of evidence, along with creating a case study database and a chain of evidence during data collection (Yin, 2003, p.97). Table 2 presents the reliability and validity tests and tactics that I undertook during this study.

Tests	Case Study Tactic	Phase of Research	Action Taken
Construct Validity	Used of Multiple Sources of evidence.	Data Collection	Interviews, video recordings, physical artefacts such as CD, flyers and media clippings.
	Established chain of evidence.	Data Collection	Interview data was both taped and transcribed. It was subsequently entered into a customised database.
	Had key informants review draft case study report.	Composition of Thesis	A chapter in a book, as well as four conference papers based on case studies, were reviewed by key informants before publication
Internal Validity	I undertook pattern matching within the data collected	Data Analysis	Patterns were identified across cases.
	I interpreted and built explanations within data.	Data Analysis	Links between cases were identified
External Validity	I used replication logic in multiple-case studies	Research Design	Three inclusive music bands were investigated using replication logic.
Reliability	I used case study protocol.	Data Collection	Same data collection procedure followed for each case (inclusive band). A consistent set of initial questions was used in each interview.
	I developed a case study database	Data Collection	Interview transcripts, other notes and links to online and physical artefacts entered into database.

Table 2: Validity and Reliability in this study

Time Frame and Units of Analysis

The fieldwork phase of this study took place between January 2011 and June 2014. The pilot phase of this study (January 2011 – June 2012) emerged from work that had a background of a two-year period between 2009-2011. The data collection period extended from September 2012 to June 2014. The timeframe for each of the locations is as follows:

Pilot Study Period:	
January 2011- December 2011	KYMI Pilot inclusive band
January 2011- June 2012	Community based pilot inclusive bands involving past members of KYMI and Enable Ireland disability services member.
Data Collection Period:	
September 2012-June 2014	Circles
October 2012 – June 2014	Till 4
November 2012 – June 2014	Mish Mash

Table 3: Timeframe for this study

Defining the units of analysis is a challenging and crucial element in case study research (Yin, 2009, p.30.) The members themselves are not the ‘unit of analysis’. The units of analysis for this study are what happened in the bands - the activities and the subsequent experiences, during this research period.

Data Collection

When discussing issues of reliability and generalisation, Yin’s three principles of data collection were introduced above which included multiple sources of data, the creation of case study databases, as well as the development of a chain of evidence. The consideration of these principles during the data collection phase

of this study ‘increases its quality substantially’ (Yin, 2009, p.98). Lawrence Stenhouse distinguishes between case study, case data and case records. Case data includes everything in terms of evidence collected (Stenhouse, 1978). According to Rudduck, a case record is a ‘cautiously edited selection of the full data available, the selection depending on the fieldworker’s judgement as to what was likely to be of interest and value as evidence’ (Rudduck, 1985, p.202). The case record consists of selections of evidence from the case data, which is then organised in a way that is relevant to the issues addressed in the case study (McKernan, 1991, p.81). To develop the case data for this study, I observed Miles and Huberman’s 4 parameters for data collection: The Setting; The Actors; The Events, and the Process (Miles and Huberman, 1994).

The Setting Site 1	The Actors	The Events	The Process
-Circles inclusive music band involving seven members, operating from the Togher Music Project (TMP).	-Seven band members; -Two band facilitators; -Volunteer students; -TMP manager; -Parents of member with disabilities; -Members of the community centre; -Members of the wider community. -Audience members.	-Weekly lessons; -Band rehearsals; -Public performances; -Planning and evaluation meetings.	-Videos recordings of rehearsals, classes, performances; -iPhone audio recordings of band members and other stakeholders expressing their experiences at various times throughout the project; -Action research diary; -Written feedback from band members; -Semi-structured interviews.

Table 4: Data Collection – Circles

The Setting Site 2	The Actors	The Events	The Process
-Till 4 Secondary School inclusive music band at TMS Community College.	-Eight band members -Four students from Terence MacSwiney (TMS) and four students from School of the Divine Child (SDC); -Parents; -Three band facilitators; -Volunteer students from University College Cork (UCC); -Special Needs Assistants (SNAs); -Principals; -Classroom teachers; -Music Generation Cork City (MGCC).	-Weekly band gatherings; -Performances; -Planning and evaluation meetings; -Skill sharing events.	Interviews; Video documentation; Portfolio of work; Action research diary; Performance documentation.

Table 5: Data Collection - Till 4

The Setting Site 3	The Actors	The Events	The Process
Mish Mash Band rehearsing at UCC School of Music and Theatre (SMT)	-Seven band members; -Two band facilitators; -Students from UCC; - Parents; -UCC management	-Weekly music rehearsals; -Performances; -Planning and evaluation meetings.	Interviews; Video recordings of performances and weekly workshops; Portfolio of work; Action research diary; Performance documentation.

Table 6: Data Collection - Mish Mash

All of this data was arranged and elements were selected to contribute to a case record. A video of snapshots from performances, workshops and lessons were also edited which were added to the case record.

Case Study and Participatory Action Research Methods

Yin emphasises that the foundation of a case study is to examine a ‘full variety of evidence – documents, artefacts, interviews, and observations’ (Yin, 2003, p.8). This requires diverse research methods that are appropriate for each context. A significant amount of data was collected within each of the three sites outlined above. Research methods included participant observations, video recording, accessible questionnaires, and semi-formal interviews. The following sections describe each method undertaken during this study.

Researcher as Participant Observer

Denzin defines participant observation as ‘a field strategy that simultaneously combines document analysis, interviewing of respondents and informants, direct participation and observation and introspection’ (Denzin, 1989, pp.157-158). Participant observation was central as a research method in this study, as it allowed me to collect data that preserved ‘the naturalness of the setting’ (Denscombe, 1998, p.148). Jorgensen proposes that a researcher acting as a participant observer needs to have an interest in human meaning and interaction, along with a process of inquiry that is open-ended and flexible within a case study design. She also emphasises the importance of the research being located in the here and now of everyday life, informed by interpretative theory

(Jorgensen, 1989, pp.13-14). It has been argued by Hammersley and Atkinson that all social research is a form of participant observation, as it is impossible to study a social world without being part of that world (Hammersley and Atkinson, 1983). Stake reflects Merriam's sentiment when he states that 'the most valuable instrument for qualitative research is the researcher - experiencing an event or listening to a person with special experience' (Stake, 2010, p.101). Merriam reflects this statement by suggesting that the importance of the researcher as a data collector and analyser cannot be over emphasised (Merriam, 1988, p.19).

Spradley distinguishes three phases of participant observation. Firstly, a researcher engages in descriptive observation in order to grasp the complexity of the field of study and to develop concrete research questions (Spradley, 1979, p.34). Secondly, focused observation is undertaken to concentrate on processes and problems that are central to the research questions. Finally, selective observation takes place where the researcher is focused on finding further evidence and examples of issues found in the second step (*ibid*).

I engaged in these three phases throughout the research process in this study. I also drew from Hammersley and Atkinson's framework for considering observation in different settings (Hammersley and Atkinson, 1983). They suggested a researcher engages as a complete participant; participant as observer; observer as participant, and complete observer (Hammersley and Atkinson, 1983, p.93).

I was significantly involved in various roles during the research process with each band. I undertook the participatory action research pattern of plan, act, reflect, re-plan, act and reflect. During this period, I intermittently acted as a

complete participant and participant as observer, mainly during the first term (12 weeks) of the inclusive bands, where descriptive observations dominated. During the middle of the data collection period, I engaged mainly as an observer as participant and eventually towards the end I engaged as a complete observer, where focused and selective observations were central to the data collection. Below is a table outlining the diverse roles and time frame in which I undertook them, throughout the research process. Also included in this table is the funding allocation to each project. I received funding from multiple sources to act as a lead or team band facilitator.

Site	My Role	Funding
Circles Sept 2012-June 2014	<p>Sept-Dec 2012 – Lead band facilitator and Soundbeam tutor.</p> <p>Jan 2013 – June 2014 – Provided ongoing professional development for new band facilitator – Graham McCarthy.</p>	<p>Voluntary; Cork City Arts Council ‘Arts in Context’ award.</p> <p>MGCC.</p>
Till 4	<p>Oct – Dec 2012 – Lead band facilitator</p> <p>Jan 2013 – Jun 2014 – Team facilitator and provided professional development for other tutors.</p>	<p>MGCC</p> <p>MGCC</p>
Mish Mash	<p>Nov 2012- Jan 2013 – Lead facilitator</p> <p>Jan2013- June 2014 – Team facilitator</p>	<p>Health Service Executive (HSE) and fees from band members.</p>

Table 7: My role in this study

Interviews

Yin suggests that conducting interviews is one of the ‘most important sources’ during case study research (Yin, 2009, p.106). When acting as a participant observer in the field, opportunities for interviews arise regularly due to regular field contacts (Flick, 2002, p. 90). Yin suggests five levels or types of questions that can be used in case study research, ranging from questions asked of specific interviewees (Level 1) to questions asked of the pattern of findings across multiples cases (Level 3) to normative question about recommendations for future research and conclusions that reach beyond the scope of the study (Level 5) (Yin, 2009, p.87).

Interviews can be divided into unstructured, semi-structured, and fully structured categories (Robson, 2002). During case study research, interviews are more likely to be fluid while following a line of inquiry rather than rigid and structured (Rubin and Rubin, 1995). In this study I used semi-structured interviews to collect data from all three sites. Runeson and Höst present semi-structured interviews as being suitable if the researcher wants to focus on ‘how individuals qualitatively and quantitatively experience the phenomenon’ (Runeson and Höst 2009, p.146). He also describes semi-structured interviews as having a combination of open and closed questions, which lead to data that is descriptive and explanatory (*ibid*). Where necessary, I adopted a range of alternative and/or augmented communication systems in order to make the interview process accessible for people with communication difficulties; for

example, I used the *Lámh* Sign System¹⁰⁴ for communication with members of Mish Mash band. I also used communication devices, including Dynavox and iPad, to communicate with various members within all three bands.¹⁰⁵

By interviewing key informants in this study, it was possible to gain diverse perspectives on the use of DMIs in the three inclusive music bands. In order to make sure the data was not overly influenced by my own perceptions and interpretations, it was necessary to engage a wide perspective from various stakeholders. Using the semi-structured approach, it was possible to explore themes that were emerging during the fieldwork. I often began interviews with personal and closed questions leading then to more probing questions relating to issues in the study. It was necessary for me to keep a focus on the framework of issues in the study's questions, as it created a boundary for me, both as the interviewer and the respondent.

To achieve accuracy, I preferred to record the interviews in this study rather than take notes. I felt that recording enabled me to focus on directing the interview as well as responding to and prompting the research participant. Donalek suggested that, if an interview is recorded, an interviewer is not distracted by having to concentrate on writing notes (Donalek, 2005, p.322). Heritage also promotes the recording of interviews, as it allows for more thorough and repeated examination of data (Heritage, 1984). He also suggests that recording opens up the data for further analysis and limits perceptions of

¹⁰⁴ *Lámh* is a manual sign system used by children and adults with intellectual disability and communication needs in Ireland. *Lámh* signs are used to support communication, similar to Makaton sign system in the UK.

¹⁰⁵ Please refer to Appendix A to see an interview with Mish Mash member Jenny Garde as an example of an interview that incorporates the use of iPad technology.

researcher bias (Heritage, 1984, p.238). I recognised that the presence of a recorder may have made respondents feel uncomfortable, however, most of the research respondents were at ease with the recorder after the first initial questions. Stenhouse suggests that recording an interview could be perceived as a type of flattery for the respondent (Stenhouse, 1984). He suggests that the researchers,

‘job is to give people the feeling not merely that they have my ear, my mind, and my thoughts concentrated on them but that they want to give an account of themselves because they see the interview as in some way an opportunity: an opportunity of telling someone how they see the world’ (Stenhouse, 1984, p. 222).

The research respondents in this study felt this process provided a reflective space where they could share their story. This was particularly relevant for the students, with communication difficulties, as adaptations were made to ensure their voice was heard.

The interviews yielded vast amounts of data, which needed to be transcribed. Lofland and Lofland suggests that, to undertake gradual analysis of qualitative data, and not leave it until all the interviews are completed, as it may seem like the researcher is facing a monumental task (Lofland and Lofland, 1995). Thus, the transcription and initial analysis of the interviews in this study was an ongoing activity throughout the data collection phase. It enabled me to be aware of emerging themes, which influenced my later interviews. I took into consideration Denscombe’s key features of a ‘good interviewer’ when conducting the interviews in this study. These features referred to an interviewer as someone who is attentive, adept at using prompts, probes and checks, is able to tolerate silence and is non-judgemental (Denscombe, 1998, p.126).

Interview bias is something that I have been very aware of throughout the whole research process. Wellington states the impossibility of a neutral observer (Wellington, 2000). Wolcott suggests that bias is a ‘thought about position from which the researcher as inquirer feels drawn to an issue or problem and seeks to construct a firmer basis in both knowledge and understanding’ (Wolcott, 1995, p.186). Awareness, reflexivity and reflectivity on such bias are central to qualitative research. I was very conscious not to impose my own viewpoints of the issues in this study, when interviewing research respondents. Also it is widely acknowledged that interviewees try to ‘express views that they think the interviewer wants to hear’ (Drever, 1995, p.30). I gathered data from multiple sources to balance this potential weakness. I conducted and transcribed fully 33 semi-formal interviews for this study.¹⁰⁶ The transcription of these interviews was a very time consuming process, however, it was, as Patton suggests, a vital element of the data analysis stage of the research (Patton, 1990, p.138). Some of the interviews with band members in this study were video recorded to take into consideration non-verbal communication.

Video Recording

Video recordings were taken of a range of performances and band rehearsals, all of which were stored on an external hard drive.¹⁰⁷ I found these recordings to be invaluable to my observations and my reflective/reflexive process when

¹⁰⁶ Please refer to Appendix B for a table that outlines the interviews that took place during this study.

¹⁰⁷ Printed material of performances and media clippings was also kept. Please refer to Appendix C to view an example of some of the printed material and media clippings relating to the three inclusive music bands.

developing the inclusive music practice in this study. My examination of the ease of DMI use and musical development of band members was aided by my examination of these recordings. For example Cillian's skill development when using Soundbeam, over this research period, is particularly evident through these recordings:

The VTR, or videotape recorder has become the most indispensable tool for all those conducting observational studies in naturalistic settings. One has a valid and reliable record of the human interaction, which can be retrieved for interpretation and reinterpretation (McKernan, 1991, p.103).

I found that certain aspects of the work, particularly performances, can be more clearly understood when watched on video rather than as a written narrative.

Written Feedback from Band Members

I also received written feedback from band members at various points through the research project. This feedback was focused on performance experiences, as well as general issues in the study, particularly relating to the use of the DMIs.¹⁰⁸

I found this was particularly useful for band members who were non-verbal and used augmented and assistive communication devices, as they had more time to independently type their experiences of using DMIs in the inclusive music bands. This feedback was verified through non-verbal communication with the research respondents using video recordings.¹⁰⁹ Once-off feedback was found to be more effective rather than regular written feedback. The latter was perceived as

¹⁰⁸ Please refer to Appendix D to view a sample of written feedback from research participant Christine Haughey.

¹⁰⁹ Please refer to Clip 5 – Sample of an Interview with Cillian on the SoundOUT Inclusive Music Bands DVD.

laborious and I decided to only occasionally introduce this strategy. In order to undertake the above research methods, consideration of issues around gaining access, receiving informed consent, and the ethics of using data and publishing results, were vital to this study.

Access

As I worked with many of the research participants, under my role as a community musician and music educator in Cork city since 2004, access to the research sites was achievable without many issues. I initially sent an invitation to participate in this study to band facilitators and partnership schools and organisations, including the Togher Music Project, School of the Divine Child, Terence MacSwiney. I subsequently requested involvement of band members and their parents. Meetings with school principals, classroom teachers, organisation co-coordinators, parents and band facilitators, took place to discuss the research. Issues that were discussed included risks, benefits, anonymity, confidentiality, and accessibility of research process, how data will be used, who will have access to it, and the rights of participants. This study was greatly supported by all partners in each site. The band members from each site were very happy to contribute to the research. The band members and many parents were very proud to be involved, as it was felt that the band activities were breaking down barriers in music education and was understood to be somewhat ‘ground-breaking’.

Informed Consent

I received informed consent from the principals of schools, organisation

coordinators, band facilitators and parents and band members in advance of commencing the research. On all consent forms, it was clearly written that the participants could participate in the research but that at any time they can withdraw from the research without having to give a reason or explanation.¹¹⁰ When conducting interviews with band members, I acknowledged the need for the young people and particularly young people with disabilities to fully understand the research process and their potential role as part of that process. I adopted a range of methods to inform the research participants about the research and their role as research participants. I disseminated accessible information leaflets to band members in order to explain the research and their role.¹¹¹ I also facilitated an interactive information session, where I presented an accessible PowerPoint presentation with the participants in advance of commencing the interviews in order to disseminate information about the research process. After the information session, band members were invited to participate in either group or individual interviews. Age appropriate and accessible consent forms were distributed and explained before the commencement of the interview itself.¹¹² The questions were read to the band members to ensure they understood them all fully. Reference was made to the details discussed in the information session to try and enhance the band members understanding of the process even further.

I received written approval by all research respondents to use

¹¹⁰ Please refer to Appendix E to view a sample consent form that was distributed to parents, band facilitators, principles, and other stakeholders in this study.

¹¹¹ Please refer to Appendix F to view the accessible information leaflet that was distributed to band members in advance of this study.

¹¹² Please refer to Appendix G to view the accessible consent form distributed to band members in advance of participating in this study.

documentation gathered, including photographs and videos recordings, for presentation in this thesis. Guidelines with regard to taking and using images of children were strictly followed. I noted the guidelines that have been published by the Arts Council of Ireland entitled ‘Guidelines for taking and using images of children and young people in the arts sector’ (Arts Council of Ireland, 2009).

Audio and video recordings of performances were used throughout the research phase. In all bands, the members were very proud of their performances and were happy for them to be filmed. The above guidelines from the Arts Council do not specifically refer to audio and video recordings, however, I adapted them in this particular context. Safeguard measures were put in place for any research participants who did not want their names revealed in any transcriptions, quotes or video recordings. All the research respondents wanted their names revealed in this study as they felt proud of their achievement in the inclusive bands. Participants were made fully aware of what the recordings will be used for and for what purpose.

Ethics

Along with the written approval I received from the research participants, discussed above, I received ethical approval from University College Cork (UCC). This study also adheres to the National Disability Authority (NDA) ‘Ethical Guidance for Research with People with Disabilities’ includes a focus on the inclusion and participation of people with disabilities in research and research dissemination; ensuring research is accessible to people with disabilities; avoiding harm to research participants; ensuring voluntary and

informed consent; understanding highest professional research standards and competencies. (National Disability Authority, 2009, p.25). While conducting the research, further safeguard measures were taken to protect the participants. As the majority of research participants were young people and vulnerable adults, there was always an adult staff member present during all participant interviews. Observation and participant observation activities in each context, both in institutional and out of institutional settings, also had an adult staff member present. Anonymity and confidentiality was guaranteed if requested by the principle of informed consent, discussed above.

Ethical considerations are deeply embedded in the research design of this study, as consent and trust was viewed not as a ‘once-off’ event but as a process that was renewed and re-established throughout the research process. For example, I ensured the ongoing consent of the participants. I also reminded them of their right to withdraw from the study at any time. I completed the research process in a sensitive way where I made sure participants were aware of their right to check how they are represented in the transcripts and field notes (Cutcliffe and Ramcharan, 2002). I also made participants aware that I analysed the data and that my supervisor and others in the context of research presentations and publications will have sight of the data.

Debriefing Process

At the end of the data collection period, I thanked the research respondents for participating and explained that I was going to write a ‘book’ to help understand the experiences of using DMIs to make and learn music in inclusive bands. I

asked band members if they were satisfied with the interviews and I told them that I would return at a later stage to present the ideas that I have collected. I returned after the data analysis phase of the research where I presented, using a PowerPoint presentation, the findings of the study using six themes. The band members gave feedback, which contributed to the case study database and case record. I also thanked the other staff members and families who participated and assured them of anonymity if requested. I stated that I was going to write up a book (thesis) and if they are interested that I would show them certain sections of the work including their quotations before I submitted a final draft. This process gave all participants the opportunity to withdraw or alter any ideas or quotations that was gathered throughout the interview process. It also enabled them to submit any additional comments or thoughts that came to mind after the interview process. I highlighted that, should they have any problems or queries regarding the research, they could contact me, or my supervisor, at any point. Two research participants (Cillian McSweeney and Graham McCarthy from Circles) provided additional material, after the interview process. No participants chose to withdraw from the study.

Triangulation of Data for Case Record

The multiple sources of data collected during this study were triangulated in order to support outcomes (Yin, 2003). Denzin identified four types of triangulation (Denzin, 1984).¹¹³ I used data source triangulation, which employs

¹¹³Four types of triangulation: 1.Data source–when looking for the data to remain the same in different contexts; 2.Investigator–when several investigators examine same phenomenon;

multiple research methods to explore the same phenomenon in different contexts. Vast amounts of material was gathered and triangulated in this study. This data was used in the development of a case record, where data is organised into themes and issues. This case record provided a framework for the case study report. Only some of this material in the case record contributes to the final case study report (Wellington, 2000, p.95). McKernan proposes that information, including an account of negotiations such as emails, documents, proposals, log notes of significant phone calls and meeting minutes, along with extracts of video and audio transcripts, contribute to the case record (McKernan, 1991). He also suggests describing each setting, charting the sequence of events in the project, along with providing background information on project personnel such as Curriculum Vitae of band facilitators. Field notes, transcripts of meetings, and reflections were also highlighted as essential elements of a case record (McKernan, 1991, p.82). Rudduck suggests that a case study report is 'the product of the field worker's reflective engagement with an individual case record' (Rudduck, 1985, p.103). As this study is multi-sited, I have developed a case record for each of the three bands presented in this study.

Analysis of Data

The techniques for data analysis vary widely, which can often be informal and an overwhelming task for researchers. Qualitative data analysis is largely focused on field notes and stories, within the context of issues or themes (Bresler and

3.Theory-when investigators with different viewpoints interpret same results; 4.Methodological-multiple approaches are used to increase confidence in interpretation (Denzin,1984).

Stake, 2006, p.296). Miles and Huberman define data analysis as involving three concurrent flows of activity: Data reduction; Data display, and Conclusion drawing/verification (Miles and Huberman, 1994, p.10). Data reduction involves the selection of data and subsequent organisation and coding into themes and categories. Data display refers to the process of representing the data in a visual form. This is the step that leads towards the development of findings. This last step involves the identification of patterns and the comparing and contrasting of data (Wellington, 2000, p.134); 'While much work in the analysis process consists of 'taking apart' (for instance, into smaller pieces), the final goal is the emergence of a larger, consolidated picture' (Tesch, 1990, pp.95-95 cited in Wellington, 2000, p.150).

Tesch outlined a systematic process for the coding of qualitative data collected during interviews. He suggested starting the process by getting a sense of the whole by reading through all transcriptions carefully, while writing notes. Subsequently, he proposed compiling the notes into similar topics and using these topics as codes. Making connections between these codes is the next step in this process. Finally, preliminary analysis can begin when the data is grouped in the same code (Tesch, 1990, cited in Creswell, 1994, p.155). I undertook these steps several times throughout the research analysis process. When the raw data from this study was collected through various research methods (questionnaires, diaries, written feedback, transcribed interviews and videos editing), I identified, coded and categorised the primary patterns relating to the issues identified during the exploratory phase of this study. Data analysis started during the data collection phase and continued through to the development of the case study

report. In order to interpret and arrange data, a continuous process of seeking patterns to connect the data to theoretical propositions was undertaken. Six themes were used to organise the data in this study, as can be seen in Chapters 8, 9 and 10 of this thesis.

Case Study Report

Yin iterates the importance of three procedures when undertaking case study report writing. The first procedure deals with developing a strategy for starting the composition of a report early in the analytic process. The second refers to the decision whether to leave the case identities anonymous, and the third describes a review procedure to increase the construct validity of the case study (Yin, 2009, p.179). These three procedures were taken into consideration during the write up phase of this study.

Extracting information from the case record, the case study report in this study includes Chapter 6, which describes the structure and pedagogic process undertaken in each of the three inclusive bands. Using Bronfenbrenner's Model of Social Ecology, Chapter 7 maps the partnerships that were established during the development of each band. Chapters 8, 9 and 10 bring together the experiences of using DMIs for meaningful music making and learning in inclusive bands, predominantly within the context of the theoretical concepts introduced in Chapters 2, 3 and 4 of this thesis. Using six themes, these findings are presented from the viewpoint of the band members, band facilitators, family members and other stakeholders. The video documentation brings to life the engagement in each of the inclusive bands. My own subjectivity is

acknowledged, however, the report assists readers to make their own interpretations of the issues in this study. The issues of inclusive music practice in Ireland and the role of DMI within this context is an important one. The stories, presented throughout this thesis, involve many people making music together that is meaningful and enjoyable.

Chapter Six

SoundOUT Inclusive Music Bands: Circles, Till 4 and Mish Mash

Introduction

In this chapter, I reintroduce and describe in detail the pilot project and three subsequent inclusive music bands that I developed as part of this study. The bands (Circles, Till 4 and Mish Mash) emerged in both community and school settings in Cork city, under the umbrella of SoundOUT, a community music organisation, which I established in January 2011. As I introduced in Chapter 1, the Circles inclusive band involved seven members: six adults who were participants in an adult music education programme at the Togher Music Project (TMP)¹¹⁴ and one adult with disabilities from Enable Ireland disability services¹¹⁵. The second inclusive band, Till 4, was composed of eight teenagers: four students from Terence MacSwiney (TMS) Secondary School, in Knocknaheeny and four students with disabilities from School of the Divine Child (SDC).¹¹⁶ I established Mish Mash, the third and final inclusive music band, as a collaborative project with University College Cork (UCC), School of Music and Theatre (SMT), as part of the FUAIM Music and Community

¹¹⁴ The TMP is based at the Togher Community Centre on the south side of Cork city. As described in Chapter 1 of this thesis, TMP is a Community Employment (CE) scheme that provides training for adults who wish to gain employment and/or further education in music.

¹¹⁵ Enable Ireland disability service is a day service centre for adults with disabilities based in the suburbs on the east side of Cork city.

¹¹⁶ TMS is a secondary school in Knocknaheeny, on the north side of Cork city, while SDC is a school that caters specifically for students with disabilities, primary and secondary school age. SDC is based in Ballintemple, a suburb on the south side of Cork city.

initiative¹¹⁷. This band featured collaboration between an SMT student and young adults with disabilities, from various disability services throughout Cork city. Being the director of SoundOUT, outside of my role as PhD student, I was in a position to develop these bands as part of SoundOUT's wider music education programme in Cork city.¹¹⁸ All three bands were established in response to requests from local communities and schools for more inclusive music making and learning opportunities in Cork city, particularly for people with disabilities who are marginalised from creative music making and learning.

I begin this chapter by presenting the pilot study developed between January 2011 and June 2012. Subsequently I describe in detail the structure development, resources and pedagogic process in each of the three inclusive bands: Circles, Till 4 and Mish Mash.

Pilot Study - January 2011 - June 2012

I established the first SoundOUT inclusive music band in January 2011, as a pilot project, in collaboration with Cork Music Works (CMW) and the Knocknaheeney Youth Music Initiative (KYMI), a community employment initiative at the Cork Academy of Music in the north side of Cork city¹¹⁹.

¹¹⁷ FUAIM Music and Community was a community engagement initiative established at the UCC SMT 2011. More information on FUAIM Music and Community is available at <http://www.music.ucc.ie/school/index.php/community>.

¹¹⁸ Please refer to www.facebook.com/soundoutmusic for more details about the citywide music education programme.

¹¹⁹ Please refer to Clip 6 – Pilot Project on the SoundOUT Inclusive Music Bands DVD to see a snapshot of the activities that took place on the pilot project.



Figure 18: Pilot Band

Cillian McSweeney instigated this project, as he was interested in creating and performing music in a band. Cillian has cerebral palsy, resulting in limited movement and no vocal communication. He attends Enable Ireland disability services, a day service centre for people with disabilities.¹²⁰ In January 2011, Cillian approached me independently with support from his personal assistant (PA), Brian O'Donovan, to collaboratively develop inclusive and progressive opportunities for music making and learning. Cillian, with support from Brian, wrote me an email, which included the following aspirations: I want to play music; I want to be in a band; I want to write my own songs; I want a qualification in music; I want a career in music (Cillian McSweeney, 2011). When I initially started to explore progressive routes for these requests, Cillian emphasised that he wanted to attend music classes outside of disability services. We began individual tuition mid-January in 2011 with SoundOUT, which was operating from the Cork Institute of Technology (CIT), Cork School of Music (CSM). It was during this period that we undertook the process of gesture analysis, as described in Chapter 3 of this thesis, in order to assess and adapt the

¹²⁰ Enable Ireland particularly caters for people with physical disabilities in Cork city

most appropriate technology for Cillian to use. After trying out various options such as the Magic Flute, the Roland Wx5 wind synth and others, I found Soundbeam to be the most accessible instrument for Cillian.¹²¹ The next step in this process involved an exploration of possible positions and parameters for using the beam and switches, for example determining the length of beam, number of notes and triggering styles. I found that Cillian had most control using minimal head movements. He also had some control over his foot and right hand, however these were not as specific as his head movements. After consultations with his physical therapist and some family members, I began to use a combination of switches and beams.

I began lessons by using Soundbeam 2, a standalone system. However, owing to the poor quality of the internal MIDI (Musical Instrument Digital Interface) sound, I changed to Desktop Soundbeam (DTSB). DTSB consists of both software and hardware, which facilitated a connection to the MIDI accessible sound generation software Reason, resulting in higher quality of sound being produced. Using DTSB, Cillian began triggering chords and melodies with his head and improvising melodies through interaction between his feet and the beams.¹²² For example, one of the first tunes he played was the melody of ‘You Raise Me Up’, using his head and he also performed a solo, using a pentatonic scale, by triggering the beam with his foot. This accomplished the first aim on the list that Cillian presented to me - ‘I want to play music’.

¹²¹ The other instruments involved blowing, which is not possible for Cillian.

¹²² Please refer to Clip 6 – Pilot Project on the SoundOUT Inclusive Music Bands DVD, to see Cillian using the Soundbeam. He uses the switch with his head and improvises melodies with his foot using the beam.

As Cillian's triggering methods became more consistent and accurate, he suggested collaborating with musicians and bands beyond music groups within disability services in Cork city. This was the second aim on his list - 'I want to be in a band'. I subsequently began contacting mainstream bands or music education groups that would be open to collaborative activities. I made contact with the KYMI, a project which provided music education opportunities for young adults from Knocknaheeny, an area identified as one of economic and educational disadvantage, on the north side of Cork city. KYMI aimed to provide progressive routes to further education or employment through music. In late January 2011, I established an inclusive band, involving Cillian and seven members of KYMI. The group began to meet on a weekly basis at the KYMI site - a prefab on the school grounds of TMS. With support from his PA, Cillian took a taxi every Tuesday to Knocknaheeny. As this inclusive band was an extracurricular activity for the KYMI students, involvement was on a voluntary basis. In total seven KYMI students were involved and there were also two music facilitators, both of whom were central to the collaborative process. My role involved supporting Cillian to create note and chords sequences and to facilitate him using the Soundbeam switches and beams to play these sequences in the band. Cillian chose notes and chord sequences through a non-verbal method of communication. He looked up for yes and shook his head for no.

The first song that the group created was called 'Equal'. Cillian wrote the lyrics with support from his PA Brian and used eye gaze technology to choose pictures and letters to express his ideas. He also used non-verbal communication with Brian to indicate various thoughts; for instance by looking at objects in the

room he suggested words or lyrical themes. They worked on lyric writing on a weekly basis. Cillian would look at an object to choose a theme and by process of elimination, by Cillian looking up for yes and shaking his head for no, he would clarify the exact words he wanted to be included. This process was very time consuming and subsequently inspired Cillian to develop his literacy skills to write his songs more independently. He began literacy classes with a speech and language therapist soon after joining the band at the KYMI.¹²³

The 'Equal' song premiered as part of Music Networks Love: Live Music¹²⁴ in Blackpool Library in April 2011. This was the first time Cillian's parents had heard the song or seen the group perform. The group subsequently recorded the song at the CIT CSM.¹²⁵ The single was launched in the popular music venue in Cork city - Crane Lane in November 2011.

¹²³ He is now able to type independently using eye gaze technology on his communication device MyTobii.

¹²⁴ Music Network is Ireland's national music touring and development agency. The Arts Council in Ireland established Music Network in 1986. Love: Live Music was an initiative by Music Network to promote live music making through a range of free music events throughout the country.

¹²⁵ This was possible with the voluntary efforts of all facilitators, Rachel Healy and Carolyn Goodwin, Cillian and KYMI band members, CIT representative John O'Connor, CMW Director Dr. Evelyn Grant, studio engineer Lawrence White, audio engineer Jamie Hanrahan and graphic designer Deirdre Frost.



Figure 19: Launch of 'Equal'

The group performed at a variety of events throughout the City, including the Cork city Lifelong Learning Festival in CIT CSM (March 2011), the FUAIM Music and Community gathering at UCC SMT (November 2011) and in Fitzgerald's Park for the Mad Pride Festival (June 2011). The experience from this pilot project was shared at the 'New Technologies New Perspectives' conference, hosted by CMW in the CIT CSM (July 2011). Representatives from My Breath My Music gave keynote presentations and performances at this conference and subsequently published a feature about Cillian and the group on their website in Rotterdam (Netherlands).¹²⁶ In July 2011, the group were invited to perform for the President of Ireland at Áras an Uachtaráin Annual Garden Party. They had the opportunity to play alongside Cillian's favourite band The Coronas. During this time, Cillian also received the Wilton Community Achievement Award toward the final stages of this project.

¹²⁶ More information on the My Breath My Music feature is available at: <http://www.mybreathmymusic.com/en/cillian.php>. Various local and national media outlets also did features on the project including the National Broadcaster TV3.



Figure 20: Wilton Community Achievement Award

Unfortunately, due to funding cuts and other limited resources, KYMI ended in December 2011, resulting in the closing of the collaborative project. In January 2012 some of the past members of KYMI and one facilitator, Rachel Healy, volunteered their time on a weekly basis to come together with Cillian and I to continue band rehearsals. The CIT Crawford College of Art and Design in Cork city provided an accessible space for the group to meet on a weekly basis. However as the term progressed it was difficult to keep going due to the lack of funding and time restrictions for band members and facilitators and consequently the band finished up in June 2012. In the summer of 2012, Cillian organised a fund-raising event in Crane Lane, which was headlined by local band Toy Soldier. Proceeds from the event were used to buy an iPad, a mount to attach the iPad to Cillian's wheelchair, in addition to an infrared switch interface and switch. As a result of these purchases, Cillian began to explore the iPad application Garageband via infrared sensors in order to compose music independently. Cillian also participated in a trial AUMI (Adaptive Use Musical Instruments) led by the Deep Listening Institute (New York) for iPad interaction with head movement. This approach did not prove to be a viable option for live

music making for Cillian, due to inconsistency and unreliability when triggering musical notes and chords. Following these explorations, Cillian began to investigate further options for inclusive music making and learning, particularly in his local area. These experiences led to the development of Circles, in collaboration with the TMP.¹²⁷

In the following section, I describe the structure including the recruitment process, available resources and the development of partnerships in Circles. I also provide insight into the collaborative and creative processes, along with the technology setup and adaptations undertaken in the band.

1. Circles - September 2012 - June 2014

I formed Circles¹²⁸, the first SoundOUT inclusive band in this study, in September 2012 in collaboration with the TMP.



Figure 21: Circles Band

¹²⁷ The TMP is based in Cillian's local community.

¹²⁸ Please refer to Clip 7 - Circles on the SoundOUT Inclusive Music Bands DVD, for a snapshot of Circles activities during this research period.

Circles structure

As a key member of the pilot project (Jan 2011-June 2012), Cillian was an instigator for the development of Circles in collaboration with the TMP. He was eager to join a new band after his positive experience with KYMI. The creation of an inclusive environment where people with and without disabilities come together to collaboratively make music was critical for Cillian. He wanted to be included in a group where the common interest was music, rather than impairment being the commonality. He wanted to break away from 'The Wheelchair Brigade' (Cillian McSweeney). This ambition to make and learn music in a new inclusive environment led me to contact the TMP, a local music education initiative on the south side of Cork city. TMP, similar to KYMI, facilitates young adults to learn musical instruments, in order to provide access to further education or employment. Initial planning took place between the management of SoundOUT, Cillian, his PA Brian, Enable Ireland and Cillian's parents. This phase involved negotiating a suitable day and time that Cillian could leave Enable Ireland disability services to travel to Togher for this project. Due to limited resources at Enable Ireland there was no transport available for Cillian and therefore his parents volunteered to bring him every week. Enable Ireland gave permission for Cillian to take one day a week off from his day service activities in order to attend this project. Brian, his PA, also worked at Enable Ireland disability service centre and he was able to move his hours so he could work with Cillian on a Tuesday in Circles. At this time, Cillian had three allocated hours to spend with a PA for social activities. As there were no PAs available from Enable Ireland to support Cillian in this project, he used these

three hours with Brian to participate in Circles. It was necessary for Cillian to have a PA for both learning support and personal care. Further planning took place with the TMP manager Noreen Crowley and TMP members. The TMP was very enthusiastic to develop creative collaborations with the wider community. Their resources for workshop or performance activities were limited, so this project provided opportunities beyond the capabilities of the TMP. It was very much a mutually beneficial endeavour.

The development of a sustainable model was important for all involved in this project. To address this, a member of the TMP, Graham McCarthy, volunteered to engage in experiential professional development in the area of group facilitation through music and the use of Digital Musical Instruments (DMIs) with people with disabilities. I provided ongoing training in these areas for Graham between September and December 2012, with a view to him becoming the lead Circles band facilitator. In January 2013, Graham undertook this role and continued informal learning with me on the creative use of DMIs within group settings outside of the hours of the Circles rehearsals. He subsequently continued his education in the area of music and technology by starting an MSc in Music and Technology at the CIT CSM in September 2013. His ongoing training and research into the development and use of DMIs has made a significant contribution to Circles.

Recruitment

The recruitment process for Circles was informal and I began by conducting an information session at the premises of TMP in July 2012. I extended an open

invitation to anyone who was interested in becoming involved. At the session, I led a discussion on the expectations, aims and ambitions, within the context of music making and learning, of each individual. In addition, music making and learning processes, along with roles and responsibilities of each member were collaboratively explored. This was when Graham's role of mentee emerged. Six members of the TMP chose to be involved and two did not. The band members ranged in age, from 20-30 years. This project was extracurricular to the TMP programme so involvement was on a voluntary basis. Rehearsals took place every Tuesday from 10-12pm at the TMP site. There were also regular performances throughout the project. I found the TMP the ideal space to collaborate due to its member's open attitudes to collaboration, combined with its close proximity to Cillian's home.

Funding and Resources

In September 2012, I was successful in receiving the Arts in Context Award from the Cork City Arts Council to develop an inclusive music band in Cork city, in collaboration with Cillian McSweeney and the TMP. This award provided funding for me to facilitate band rehearsals with Circles between September and December 2012. Alongside these weekly gatherings, Cillian received individual song writing workshops with SoundOUT facilitator and founding member of local pop band Toy Soldier - Cian Walsh.¹²⁹ These workshops had a particular focus on lyric writing and the use of Garageband as a compositional tool for Cillian's songs. The funding from the Arts in Context Award finished up in

¹²⁹ Collaborations with other local musicians also took place for local rapper and music producer GMC as well as local musician Kevin O'Shanahan undertook once-off workshops with the band.

December 2012. In January 2013, as part of the wider SoundOUT music education programme, Music Generation Cork City (MGCC) began funding Circles. Graham, the TMP member who engaged in professional development during the first phase of the project, received ongoing funding for two hours per week to work with Circles. He provided individual Soundbeam lessons for Cillian and facilitated the weekly band rehearsals. I continued to participate in weekly rehearsals as a participant-observer between January and June 2013 on a voluntary basis. I also engaged with performances and events from June 2013 and June 2014. Circles continue to meet on a weekly basis.

A variety of instruments and the use of a small recording studio was made available every Tuesday to Circles at TMP. Instruments used in the band included, drums, keyboards, guitar, bass, Soundbeam and some members sang. The conventional instruments belonged to the TMP, however the Soundbeam was brought every week by the facilitator.¹³⁰

Partnerships, Performances and Networks

As a result of SoundOUT's partnership with MGCC, Circles developed a strong connection with the Cork City Music Education Partnership (CCMEP).¹³¹ This relationship enabled me to promote inclusive music practice in Cork city. It also facilitated me to easily connect and collaborate with local music education organisations and practitioners in the city that are committed to 'The Use of

¹³⁰ The DTSB and laptop was on a long-term loan from CMW.

¹³¹ In September 2012, I became a board member on the CCMEP representing SoundOUT and promoting the development of inclusive music practice in Cork city.

Music as a Tool for Social Inclusion’.¹³² Opportunities to share practice from the Circles project arose from various performance activities and conferences, often facilitated and promoted by MGCC. Circles have performed at various MGCC events locally, including the Concert Party at Cork City Hall in 2012 and in Cork Opera House in 2014 and 2015. The band also played at the Life Long Learning Festival in the CIT CSM (2012), CIT Rory Gallagher Auditorium (2013), and as part of Cork’s Mad Pride Festival (2012 and 2013) in Fitzgerald’s park. Through its association with the Cork City Disability Arts Network, Circles were invited to perform at Culture Club (2012) in a local club venue, City Limits, in Cork city. Culture Club was an accessible nightclub run by and for people with disabilities in Cork city. In December 2013, UCC SMT, a partner of the Cork City Music Education Partnership (MEP), invited Circles to perform in the prestigious venue the Aula Maxima at UCC as part of the FUAIM lunchtime concert series. International connections have also been made between Circles and various organisations and researchers, in Europe and in the US. Significant collaborations with My Breath My Music, the accessible music programme in the Netherlands, and SKUG, a digital music project in Norway, has supported much of the practice and technological developments in Circles. Circles also became ‘runner up’ in the international Soundbeam competition (2013), where Led Zeppelin star John Paul Jones was amongst the adjudicators. (The Soundbeam Project, 2013). In addition, my involvement with the ‘Special Music education and Music Therapy’ commission as part of the International Society

¹³² The CCMEP was established in 2009 after emerging from the Cork Community Music Network. A Cork city Council report ‘The Use of Music as a Tool for Social Inclusion’ documented the activities of members of the Cork Community Music Network.

for Music Education (ISME) has provided immense inspiration for the inclusive practice in Circles.¹³³

All of these diverse partnerships and collaborations enabled Circles and SoundOUT to contribute to a discourse of inclusivity, particularly within arts and educational developments, on an international, national and local level, through performance and research dissemination.

Circles Process

In this section, I introduce some of the collaborative and informal music making and learning processes implemented within the Circles band to foster cohesion through creative practice.

Collaboration

As Circles involved diverse groups of individuals, I explored a collaborative approach that aimed to accommodate the needs of all band members. The group felt it was important to ensure engagement in the project was meaningful for all involved, not just Cillian.¹³⁴ At all stages in the process, the members collaboratively chose what music they wanted to play, how they wanted to play it and what instruments they were going to use. Cillian communicated with the band members with his eyes – he looks up for yes and shook his head for no. He

¹³³ I attended the ISME ‘Special Education and Music Therapy’ commission in Thessaloniki in 2012, where I connected with practitioners and researchers from around the world. I have stayed in contact with some members and contributed a book chapter to a recent publication by prominent commission members, Dr Kimberly McCord and Dr Deborah Vanderlinde (2015).

¹³⁴ In the pilot project there was a strong focus, particularly from local and national broadcasting media, on Cillian’s achievements within the pilot band, as opposed to the whole band achievements. Cillian however wanted to redress this in Circles, by promoting a more collaborative focus on group values and ambitions.

occasionally used assistive technologies to communicate, for example, he often used eye gaze technology to trigger digital voices on a mobile computer system called Dynavox and more recently on his MyTobii.¹³⁵

There was an informal atmosphere at the Circles rehearsals. The facilitators, (myself from September - December 2013 and Graham from January-June 2014), provided support to the band members when necessary, however the group approached involvement in Circles in a similar manner to any band rehearsal. Graham describes the process as ‘very collaborative’. Below he recounts his role in the band:

One part is that I’m a performing musician. I also help facilitate the arrangement of the music particularly with the technology, seeing how it could be used and how Cillian's part would work within the arrangement. I also would have an organisational role in terms of organising activities when people are around. My role involves collaborating and communicating with different people all of the time. (Graham McCarthy)

In addition to these micro collaborations within the band, I engaged in collaborative planning on a structural level with the TMP manager Noreen Crowley, Enable Ireland person-centered planner, Miriam Gallagher, MGCC co-ordinator Margaret O’Sullivan, and Cillian’s parents, Angela and Tom McSweeney.

Creativity

Decisions about the instruments and repertoire were made by the band

¹³⁵ Dynavox and MyTobii are communication devices that enable an individual to type and communicate digitally using eye gaze technology. This was the same system Cillian used to develop his literacy skills in order to write lyrics for his songs independently.

themselves. During the initial stages of the project, they focused on cover versions of popular songs. After approximately four weeks, they began to develop an interest in creating new material. This process naturally evolved and engaging in creative practice through the development of original music became central to the Circles project. The process of creating a song usually involved Cillian bringing in some lyrics he was working on during the week, either on his Dynavox or with Brian his PA. He worked on lyrics with Brian, using non-verbal communication, when the technology became too tiring. The following lyrics, written by Cillian, formed the base of the first original song the band worked on together:

*I am locked, locked, locked, into a daily life,
that I, I, I, can't get out of. I see, see, see, a world outside
that I, I, I, want to live in.
But now I see a way out, where I have a chance,
to live my life outside.
To give the world somebody to think about.*

*Unlock these doors.
Smash down these walls.
Break down these fences and
let me be free.*

The group explored various rhythms and chord progressions to support these lyrics. They undertook this exploration through an improvisational process. The group initially chose a key to work in, as this was necessary for Cillian to

contribute using the Soundbeam.¹³⁶ Often the notes of a pentatonic scale¹³⁷ were set up on a beam in order for Cillian to improvise freely with the group. Following these improvisational activities, Cillian would often go home and use eye gaze technology such as the EyeHarp, or the infrared switch with Garageband application on his iPad, or more recently using E-Scape to choose note sequences, rhythms or chord progressions. He often brought back suggestions to the group after improvisations. The choosing of note sequences or chord progressions was such a time consuming and tiring process, that Cillian preferred to do it at home with no distractions or on an individual basis with Graham. He created solo pieces as well as melodies and chords, which were digitally inputted by the facilitator into the Soundbeam system, and subsequently triggered during the band activities and performances. As the group had limited experience of arranging music for a band, Graham often supported the members with the final arrangements of songs. In the following section, I provide an in-depth description of how the Soundbeam, and other technologies were used and adapted to support Cillian to engage as meaningfully as possible with Circles.

Circles Technology Setup and Adaptations

Drawing on the experiences of the pilot project, I integrated Soundbeam technology into band activities from the beginning, so Cillian could actively

¹³⁶ It was not possible for Cillian to navigate freely and independently between keys, notes and scales using the Soundbeam system. The notes needed to be predetermined. We found that using a pentatonic scale within the chosen key provides a certain amount of freedom for Cillian to improvise creatively using the beam with the group.

¹³⁷ A pentatonic scale is a musical scale or mode that is composed of five notes in any octave. It is the first, second, third, fifth and sixth note in any key. This sequence of notes sound harmonious when randomly played against chords in the related key.

make music with the band straight away. Figure 22 is a visual representation of the DMI setup, alongside other musical instruments in Circles.

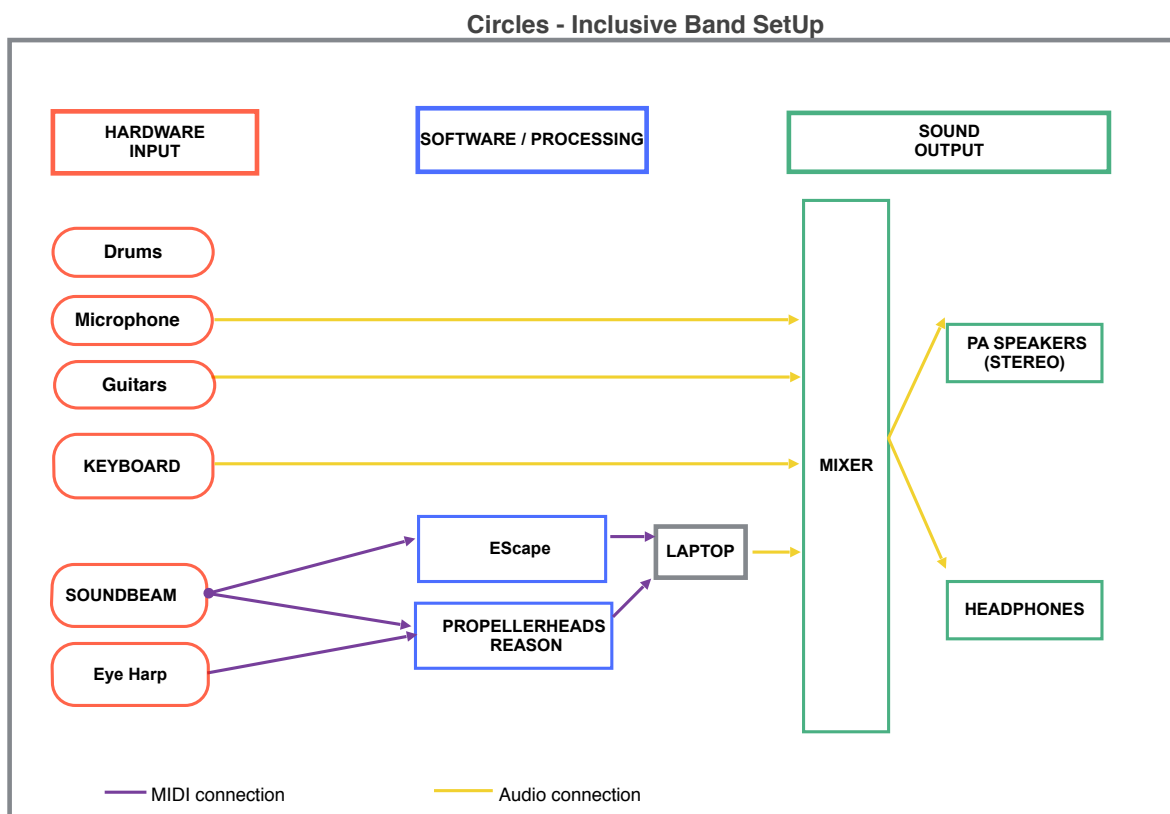


Figure 22: Circles Band Setup

The red boxes in Figure 22 refer to the instruments used in the band, including DMIs, Soundbeam and the EyeHarp. The blue section refers to the sound generation software that links the controllers of the DMIs to the sound outputs (green boxes). The yellow lines represent the audio connections from the instruments to the speakers, whereas the purple lines represent MIDI connections.

The creative and collaborative approach, central to Circles activities, highlighted some limitations in the creative use of Soundbeam. In order to

augment Cillian's creative experiences of making music in Circles, I adapted existing Soundbeam practices. As discussed above, I often inputted pentatonic scales in the beam to enable Cillian to improvise with the band. To allow Cillian more scope to perform specific notes and sounds, I also expanded his use of the pressure switches, which he triggered with his head. I developed a system of multiple setups where a setup refers to a combination of sounds and note/ chord sequences. Having multiple setups enabled Cillian to play different sounds, note sequences and chords for various sections of a song. Common Soundbeam practice involves using the same sound and note/chord progression on a switch or beam, which are be used through a piece of music or would be changed and controlled by a facilitator. Cillian began to use two pressure switches, one for navigating between setups and one for performing the sounds and note/chord sequences.¹³⁸ Cillian's dad, Tom, created a customised head mount that could be connected to his wheelchair in order to attach two pressure switches via velcro tape. Using these two switches, Cillian could move between any number of setups. The number of setups was often limited to four per song. For example, I would use a different setup with a different set of sounds and chord progressions, for each of the following sections – A. Introduction; B. Chorus; C. Verse; D. Middle 8. To remember the order of the setups and know what setup he was triggering, Cillian suggested placing the laptop beside him, so he could see the title of each one appear on the software as he moved between them.

Each setup was played in the sequence they were inputted. For example, if

¹³⁸ Please refer to Clip 8 – Improvising and Multiple Setups on the SoundOUT Inclusive Music Bands DVD.

Cillian wanted to move between sections A, B or C, he moved between the setups, in the order they were inputted. He could not jump from section A to section C unless it was predetermined and inputted in advance. Furthermore, each note sequence within each of these setups was static and forward moving. Consequently, it was not possible to move back and forth between the notes or chords. For the practicalities of performance, it was advantageous to cap the amount of notes per sequence to a small number. I adhered to this approach at Cillian's behest, as it provided him with an opportunity to reset his note sequence quickly and effectively should he lose his position in a song. This lack of flexibility of random choice between notes within the sequences had an impact on creative and improvisational activities. During rehearsals, the group often started 'jamming' and I discovered that it could be difficult to change the necessary information on the Soundbeam to keep up with key changes within an improvisation. Furthermore, the rhythmic potential of using the pressure switches was subject to a tempo threshold. I found it important to choose phrases that could be performed within the range of Cillian's movements and pace. Cillian had to remember two fundamental elements when playing music with Soundbeam technology - when to change setup and when to trigger the notes from the sequence in each setup. This multi-setup approach greatly expanded his capabilities of creatively making music within Circles beyond the pilot study. However, Soundbeam still presented some limitations for Cillian and he still had to depend on a facilitator to input note sequences for him.

Coinciding with Graham starting his MSc in Music and Technology at the CIT CSM in September 2013, Cillian and Graham began to explore more

flexible technologies, that would support more creative and independent endeavours for Cillian. The use of eye gaze technologies seemed the most appropriate route, as Cillian was very adept at using this technology with his communication device. While researching for the MSc, Graham discovered the EyeHarp - a DMI accessible via eye gaze technology. This software and interface was developed as part of an MA study conducted by Zacharias Vamvakousis.¹³⁹ The EyeHarp is the first eye-controlled DMI, providing autonomy for a player to choose and select notes, chords, scales, sounds, tempo and keys independently. Cillian began to use the EyeHarp with his communication device Dynavox. It quickly became apparent that the insufficient processing rate from the Dynavox was having an impact on Cillian's engagement with the software, particularly for live performances. The battery life of the system was also very short and it would freeze the screen often. His Dynavox eventually broke down in September 2013 after 10 years of use. As this type of communication system costs approximately €15,000, it was not possible to source a replacement until February 2015. However, he received a loan of a newer communication device called MyTobii from Enable Ireland's National Assistive Technology Unit.¹⁴⁰ Cillian used the borrowed MyTobii to explore the EyeHarp. There were many barriers to using this software with this device, such as small screen size, which led to difficulties in navigating elements of the EyeHarp software. Additionally, the sound output on the MyTobii was damaged, resulting in Cillian not being able to clearly hear the

¹³⁹ Zacharias is currently engaged in PhD study on this topic at the University of Barcelona.

¹⁴⁰ This MyTobii device was recommended for Cillian by his therapists (occupational / speech and language therapists) at Enable Ireland. Following substantial advocacy work by Cillian's parents, the Health Service Executive (HSE), committed funds to purchase a new communication device (MyTobii) for Cillian.

sound produced. Until he received the updated version of MyTobii, which featured a more responsive eye gaze system, and included a larger display screen, Cillian chose to use the EyeHarp solely to compose melodies using the sequencer function. These melodic patterns were subsequently inputted into the Soundbeam by a facilitator.¹⁴¹

Cillian and Graham also investigated the potential for using the E-Scape software to enhance creative experiences in music making and learning using a DMI.¹⁴² As described in Chapter 3, E-Scape was created by Tim Anderson as an accessible music composition and performance software.¹⁴³ This software enables users to independently input notes and chord sequences and subsequently play them back using switch technology. Initially, use of this software proved difficult for Cillian, as it was challenging to navigate due to small menu options. Anderson has recently released an eye gaze accessible version of E-Scape, which Cillian is currently exploring. As part of his MSc in Music and Technology, Graham also collaborated with Anderson to expand E-Scape's capabilities to provide independent access to higher quality sounds via eye gaze. This collaboration involved Graham creating an eye gaze accessible sound generation unit that connects to E-Scape. Cillian is now able to independently compose via eye gaze and perform the ensuing compositions using switches. Graham's software also facilitates him to choose and manipulate high quality sounds for his note and chord sequences. The aim of these developments was to enhance

¹⁴¹ Please refer to Clip 4 –EyeHarp on the SoundOUT Inclusive Music Bands DVD.

¹⁴² Please refer to Clip 9 – Eye Gaze using E-Scape and Digit-Eyes on the SoundOUT Inclusive Music Bands DVD.

¹⁴³ E-Scape is similar to Sibelius but is switch accessible.

meaningful engagement for Cillian in the music making and learning process, as well as inspire further technological and pedagogical developments in the area. The experiences from Circles significantly influenced the inclusive structure, the facilitation process and technological use and adaptations in both Till 4 and Mish Mash. In this next section, I describe Till 4 in detail.

2. Till 4 - October 2012 - June 2013

I established the second SoundOUT inclusive band, Till 4¹⁴⁴, in October 2012.



Figure 23: Till 4 Band

Inspired by the Circles band, I developed this school-based project in collaboration with TMS community college, a secondary school on the north side of Cork city; SDC, a Special Educational Needs (SEN) school on the south side of Cork city and MGCC, a citywide performance music education initiative. As Cillian, is a past pupil of SDC, both the staff and students at this school were aware of Cillian's musical progress and many students expressed an interest in following his musical path of 'making music in a band' and 'doing gigs' (Cian

¹⁴⁴ Please refer to Clip 10- Till 4 on the SoundOUT Inclusive Music Bands DVD for a snapshot of Till 4 activities during this research period.

O'Sullivan). Below I describe the Till 4 structure together with the recruitment process. I also introduce the Till 4 band members and facilitators along with outlining the funding and resources made available for this project. Also I finish with a description of the adaptation made to the technology in the Till 4 band.

Till 4 Structure

I established Till 4 in October 2012 as part of the SoundOUT music education programme¹⁴⁵, in partnership with MGCC. Till 4 was the first school-based inclusive band in this programme. Planning for Till 4 began in July 2012 with meetings between SoundOUT, the coordinator of MGCC, the principal and classroom teacher at SDC and the principal and classroom teacher at TMS. Both schools were involved in the wider SoundOUT performance music education programme, as students were already receiving individual or small group tuition in each school.¹⁴⁶ When discussing the development of Till 4, representatives from each school agreed that involvement in an inclusive band, that brings together students from SDC and TMS would be beneficial for students in each school. Subsequent discussions took place between all Till 4 band facilitators and classroom teachers in SDC and TMS.

Learning from my experience on the pilot study in Circles and taking the expertise of the classroom teacher in each school into consideration, I suggested

¹⁴⁵ The SoundOUT programme, as described in Chapter 1, provides instrumental and vocal tuition, including DMI tuition, to approximately two hundred young people from mainstream (primary and secondary) and SEN schools in Cork city. There are currently seven SoundOUT facilitators. I coordinate and provide administration support for the development and ongoing facilitation of this work.

¹⁴⁶ 11 students from SDC and 40 students from TMS received individual and small group instrumental and vocal tuition on a weekly basis, as part of the SoundOUT inclusive music education programme.

to keep the number of students low in order to have sufficient individual contact time between each student and the facilitator. In addition, as many of the students in SDC required DMIs to independently play music, I felt that having a low student number would enable the facilitator to arrange and adapt the technology to the specific needs of each student. I also felt that this individualised process would be difficult if more than four students from each school were involved in the band. It was agreed that weekly one-hour gatherings throughout the academic year, involving eight students, four from SDC and four from TMS, was a suitable number and time scale.

The site of TMS was considered the most suitable by all involved. Also TMS fell within MGCC's remit to financially support projects in RAPID areas¹⁴⁷. I encountered some difficulties in organising a suitable time for the project, as it was necessary to take into consideration the timetables of both schools, as well as the facilitators. I found that a Wednesday afternoon, after TMS finished classes, was the most appropriate time to facilitate the project. Access to a space to store equipment, combined with choosing a time where making loud music would not interfere with classes, were key factors. Scheduling Till 4 rehearsals on a Wednesday afternoon (from 1:30-2:30pm) enabled TMS students to attend after school hours, as they finished at 1pm on a Wednesday. This time also facilitated SDC teachers and Special Needs Assistants (SNAs) to provide support for their students, as SDC did not finish

¹⁴⁷ As introduced in Chapter 1, the term RAPID refers to areas that experience disadvantage. There are four RAPID areas in Cork city. The aim of this programme is to improve the quality of life in these areas and provide opportunities for the people living there. More information on RAPID is available at: <http://www.corkcity.ie/services/housingcommunity/rapid>

school until 3pm on a Wednesday. The school principal advised me that receiving support from parents of SDC students, to bring their children after school hours, would not be possible. The school agreed to provide a bus and learning support (1 classroom teacher and 1 SNA), on a weekly basis, for the students.

Till 4 Recruitment

There were seven facilitators involved in the SoundOUT music education programme in partnership with MGCC in 2012. I chose to work with SoundOUT facilitators, in the Till 4 inclusive music band, whose practice resonated with the principles of inclusion and celebration of diversity. I particularly endeavoured to work with facilitators who embedded informal and creative processes within their practice and had an interest in using DMIs. I met with two other facilitators - Rory McGovern¹⁴⁸ and Rachel Healy¹⁴⁹ - to discuss the principles and potential strategies for facilitating the Till 4 inclusive band.

In year two another SoundOUT facilitator, Jessica Cawley¹⁵⁰, who was

¹⁴⁸ Rory McGovern studied music at UCC and trained as a secondary school music teacher in University of Limerick. After receiving his diploma in Music Teacher Education he decided to explore and embark on more informal teaching approaches to music making and learning. He is a lead facilitator with Youth Work Ireland's Cork Music Project. He is also an active musician in Cork city where he is currently involved in a range of bands. Rory teaches a range of instruments, both in TMS and SDC. He also integrates music technology into his teaching practice on a regular basis.

¹⁴⁹ Rachel Healy is also a music graduate from UCC. She subsequently enrolled in an MA in Ethnomusicology at the University of Belfast. Rachel is active as a community musician in Cork city and county. Rachel worked with the KYMI and collaborated with SoundOUT during the pilot project for this study. She worked as a voice coach in TMS and as band facilitator in Till 4 between September 2012 and June 2013.

¹⁵⁰ Jessica Cawley is originally from the US. She trained as a secondary school music teacher and band director in the US. She recently completed her PhD studies on informal learning in Irish traditional music at UCC. Jessica taught saxophone and was a band facilitator in SDC and TMS from September 2013 – June 2014.

working for SoundOUT in a primary school setting, joined the project.¹⁵¹ Students from UCC SMT also volunteered with Till 4 over a period of six weeks in year one and year two. All facilitators and volunteers contributed diverse experiences, which supported the Till 4 band development. I worked as a team facilitator with Rory and Rachel in year one and in year two I worked with Jessica and Rory. Jessica, Rachel and Rory's expertise in community music and their passion for developing inclusive practices, significantly influenced the development of this band.

Before we started weekly band rehearsals at TMS, we undertook a short recruitment process. Involvement in this band was on a voluntary basis. Rory, Rachel, and I conducted an information session and recruitment workshop in each school. This process provided students with an opportunity to try out some band activities, using some of the instruments available. It was during this first encounter that we tried to gauge interests and the music making and learning values and ambitions of the students. Eight places were made available and were all filled by students. There were four students from TMS (Darren O'Leary, Deana Purcell, Josh Crean and Stewart Murphy) and four students from SDC (Cian O'Sullivan, Danielle Murphy, Shauni Breen and John O'Shea). The students all had diverse musical experiences, interests and ambitions. In the following section, I briefly introduce each Till 4 band member.

Darren O'Leary was a third year student at TMS when he first joined Till

¹⁵¹ Jessica replaced Rachel, who for health reasons was unable to commit to the project beyond the first academic year.

4.¹⁵² Darren's musical journey began when he was in primary school at Blarney Street Boy's school. His 6th class teacher introduced him to music through an informal school rock band, where he learned to play the drums and was introduced to guitar and bass. Outside of school activities, Darren also attended The Hut, a local youth music initiative based at Youth Work Ireland, Cork. Rory McGovern, one of the facilitators for Till 4, is also a facilitator at The Hut. Darren is very passionate about music and is currently studying for his Leaving Certificate examination with a hope to study music after school.

Deana Purcell was also in third year at TMS when she joined Till 4, where she sang and played keyboard in the band. Deana did not engage with music in school settings prior to this project. However, she received encouragement from her classroom teacher Mr. Sheehan to join Till 4. Mr. Sheehan is the dedicated liaison person for the SoundOUT music programme in TMS and has a strong interest in music. He regularly has sing-a-longs in his classes, where he encourages all students to participate. Since joining the band, Deana has made friends with Darren O'Leary, who subsequently invited Deana and other Till 4 students to The Hut after school on Tuesday evenings with Rory. Deana has been attending Till 4 rehearsals on a Wednesday after school and The Hut on a Tuesday evening since October 2012.

Josh Crean was also in third year when he joined Till 4. He had recently transferred to TMS from a local secondary school in the Cork suburbs. Josh and Darren were good friends outside of Till 4 and they both made a decision to join

¹⁵² Darren was 15 at this time. Most secondary students in third year would be between the ages 15-16 years.

the band together. Josh wanted to learn how to play guitar and sing when he joined Till 4. He did not have previous musical experience in either formal or informal settings unlike Deana and Darren. Josh did not join The Hut on Tuesday evenings, as he lived too far away to get there every week. Josh developed a strong interest in writing and performing his own original songs.

Stewart Murphy was also a third year student at TMS when he joined Till 4. He learned to play the bass guitar and keyboard in the band. Stewart had no previous musical experience before joining Till 4. He also has siblings (two sisters) involved in the SoundOUT music programme, however, he is the only one involved in Till 4. Stewart developed a strong interest in learning how to use the sound equipment for sound recording and production. This led to him developing an interest in pursuing sound engineering as a possible career after school. He took on the responsibility for managing and setting up, sound equipment for rehearsals and performances.

In the following section, I introduce the four students from SDC

Cian O’Sullivan joined Till 4, when he was 16 and a student at SDC. Cian’s previous musical experience involved him taking part in musical activities throughout his primary and secondary education at SDC. I worked with Cian between 2008 and 2011 through my role as a music teacher in SDC. Cian had experience of playing a wide range of instruments including DMIs, however he chose to play acoustic drums alongside Darren in Till 4. He also used the iPad in the band to compose and perform his own music. He particularly liked using the iPad drum setting (Garageband). Cian, Darren and Deana are from the same

housing estate in Knocknaheeney. Cian has a physical disability including mild learning difficulties.

John O'Shea was 17 years old and a student at SDC, when he joined Till 4. John moved to SDC from a mainstream school in rural Cork during transition year.¹⁵³ He did not participate in music in his previous school but he did display a strong interest in digital music when he joined the band. John mainly used Soundbeam and the iPad to perform with Till 4, where he improvised using the beam and played chords on the iPad application Garageband in real time. John has advanced muscular dystrophy. He is a wheelchair user and has limited movement in one hand.

Danielle Kelly was also a 17-year-old student at SDC when she joined Till 4. She played keyboard and some keyboard MIDI controllers in Till 4, where she used colour-coordinated scores to learn chords and melodies. Similar to Cian, Danielle had a wide range of musical experiences throughout her primary and secondary school education at SDC. I taught Danielle keyboard for two years prior to her joining the group.¹⁵⁴ She also learned to play the Magic Flute and Soundbeam in classroom music activities in SDC. Danielle had a strong interest in music when she became involved in the band. She is a wheelchair user but has good mobility in her arm movement.

Shauni Breen was a 16-year-old student from SDC when she started playing with Till 4. Shauni was a singer and also played Magic Flute and saxophone in Till 4. As with Cian and Danielle, Shauni participated in music

¹⁵³ He attended SDC on work placement as part of his transition year programme and felt so comfortable in the school that he moved there the following term.

¹⁵⁴ I also taught Danielle music at SDC between 2008 and 2012.

throughout her primary and secondary education. She previously performed music using Soundbeam technology and the Magic Flute in a variety of concerts at her school. Shauni also developed a strong interest in singing through being involved in Till 4. She comes from a travelling family on the south side of Cork city, where singing is considered a very valuable talent.¹⁵⁵ Shauni has cerebral palsy and has limited leg movement.

None of the Till 4 band members from SDC had the opportunity to make and learn music outside of schools settings, unlike the members from TMS.

Funding and Resources

Following the recruitment of students and facilitators, a consultation process took place with each school, specifically between the facilitators and classroom teachers. This consultation process took into consideration the resources, specific learning supports and professional development needs to ensure meaningful involvement of all students. The provision of a classroom teacher and a SNA from SDC, in addition to the three Till 4 music facilitators was deemed necessary to support the students from SDC to travel on a weekly basis to TMS. From October 2012, MGCC allocated a number of funded hours for the three music facilitators (Rory, Rachel and I in year 1 and Rory, Jessica and I in year 2) to facilitate the weekly inclusive band rehearsals. The project took place for one hour on a weekly basis during the academic term of 30 weeks. MGCC also allocated 10% of running costs to support the administration of the project. SDC provided a bus to transport students to TMS every week. TMS made available a

¹⁵⁵ Her family have recently moved from a caravan site to a housing estate in Togher.

room for music sessions in their school on a weekly basis. This room was not a dedicated music rehearsal space so they also provided a storage space for the music equipment. After the consultation process with the schools, another meeting took place MGCC, to examine the practical supports necessary for this project. Instruments for the project were purchased by MGCC and were given to SoundOUT on a long-term loan, to develop further inclusive music education projects. These instruments included saxophones, keyboards, drums, acoustic, bass and electric guitars as well as one Soundbeam 5 system and one Magic Flute. The Cork ETB also provided the project with an iPad. In year two of the project, MGCC invited members of the Soundbeam Project in the UK to come to Cork and deliver professional development training on the use of the Soundbeam 5. This training opportunity was extended to both the facilitators on the SoundOUT programme, as well as local musicians and educators interested in using Soundbeam technology in their practice.

MGCC committed to providing funding to the SoundOUT music education programme, which included Till 4 and Circles, over a three-year period (September 2012-January 2015). In January 2015 the Department of Education and Skills (DES) began providing partial funding to support for Music Generation projects nationwide. SoundOUT is still receiving funding from MGCC with the financial support from the DES and a range of local partners.¹⁵⁶

¹⁵⁶ Local partners include University College Cork, Cork Education and Training Board, Cork Institute of Technology and Health Service Executive. This funding is subject to review on a term-to-term basis

Partnerships, Performances and Networks

The development of partnerships, on a micro and macro level, was a core element of the Till 4 band. Partnerships evolved between the staff and students at each school and were supported through ongoing communication and collaboration between facilitators and the classroom teachers at both SDC and TMS. Further partnerships, created beyond the Till 4 band, enabled me to share and engage in critical dialogue about my inclusive practice, with other music education programmes on a local and national level. The MGCC network provided opportunities to regularly share ideas and discuss the various teaching methodologies and learning approaches with a wide range of facilitators in Cork city. Also, through the Cork city MEP executive committee, I have the opportunity to discuss policy development and issues of quality and sustainability in the wider context of music making and learning in the city. The partnership with MGCC coordinator Margaret O’Sullivan also resulted in connections with other MEPs throughout Ireland. These multi-layered partnerships provided opportunities for me to share resources and ideas from the Till 4 project in Cork city. Till 4 was highlighted as a model of good practice, which has led to me providing consultations and ongoing professional development to facilitators from other Music Generation MEPs around the country (Laois and Mayo).

MGCC facilitated events, which included performances from a range of their community partners. These events enabled Till 4 to gain performance experience alongside diverse groups and in a wide range of prominent venues in Cork city. For example, the group performed for the Lifelong Learning festival

in Cork City Hall and for MGCC's annual party in the Cork Opera House. Till 4 also became the house band for the Christmas school concerts at both TMS and SDC including TMS's Christmas performance called 'Knocka's got Talent' and SDC's annual Christmas gathering. Performances also took place in local community centres and at local community events.

The development of partnerships through research networks also facilitated me to have a national platform to share ideas, resources and ideologies for the development of inclusive music education practice in Ireland. Since the development of SoundOUT, I have been a founding executive board member of the Society for Music Education in Ireland (SMEI) 2011-2013, and I also made contributions to conferences locally, nationally and internationally. International collaborations have also influenced the work in Till 4, for example connections with the Soundbeam Project, My Breath My Music, SKUG and the Drake Music Project. Research partnerships with members of the ISME commission 'Music in Special Education and Music Therapy' resulted in the publication of a book chapter, through which I shared experiences relating to the Circles and the Till 4 project. This chapter was published by Oxford University Press, in 'Exceptional Music Pedagogy for Children with Exceptionalities', which was edited by Dr Kimberly McCord and Dr Deborah Vanderlinde (McHale, 2015). In the next section, I describe the collaborative and creative processes undertaken in Till 4.

Creative and Collaborative Processes in Till 4

In Till 4, I aimed to facilitate collaborative and creative music making and

learning by bringing together young people from TMS and young people from SDC within an inclusive environment.

There were various levels of collaboration between facilitators, students, classroom teachers, parents and school principals in this project. Three facilitators worked together in the same room, with the same group of people - each facilitator focusing on diverse aspects of support for the band. I assumed responsibility for using DMIs and supporting students with assistive and augmented communication devices. Rory (instrumental) and Rachel (vocal) were responsible for facilitating the main band activities. We worked together to make the environment as supportive and meaningful for the students as possible. Before the weekly gatherings, we set up the band space together in advance of the students arriving.¹⁵⁷ This was a time consuming process, as the setup not only included a full back line (PA, keyboards, drums and guitar amplifiers), but also a wide range of DMIs that needed to be connected to each other and to the PA.¹⁵⁸

The students from both schools worked together on a range of group music making and learning activities, in conjunction with the facilitators. For example, during the first few weeks the group undertook large group and small group activities. Some weeks involved SAMBA workshops with the full group, which integrated the use of DMIs, so students with limited movement could perform the rhythms. On certain weeks song writing workshops took place. When working

¹⁵⁷ Over time some students from TMS arrived early to help with the setup, for example, Stewart always came to help.

¹⁵⁸ A PA is a system composed of a mixer / amplification and speakers and traditionally stands for Public Address, as the system needed to provide sufficient volume for an individual to address the public. Backline primarily refers to audio amplification equipment behind the performers onstage but more recently the term has evolved to include instruments such as keyboards and drums.

on a song, occasionally the band would separate into three smaller groups for approximately 30 minutes to work on specific aspects of a piece. For instance, the drums and bass would work together in one room, singers in another room and instrumentalists, including students using DMIs, would work in a third room. On their return after 30 minutes, they would combine their work efforts to contribute to a whole group performance. Students from each school were mixed within these small groups and collaborations took place. The process within the weekly sessions was very informal, however there was an over-arching structure of learning new skills and implementing them every week. Where possible, the majority of band activities were student-led.

Getting to know the students, particularly their aims and ambitions in music making and learning, was central to this process. They chose which instruments they wanted to learn as well as collaboratively deciding what style of music to play. This was the first time that some of the students from SDC had an opportunity to play instruments, beyond keyboard, percussion instruments and DMIs. This led to some of the students from SDC playing acoustic drums (Cian) and saxophones (Shauni). Playing cover versions of popular songs was the main activity for year 1 of the project. In year 2 the students expressed more of an interest in creative music making. They wrote a song together called 'Rewind', which was performed at the MGCC concert in the Cork Opera House in March 2014. They collaboratively chose the name 'Till 4' as a name for the inclusive band. This was inspired by the time school finishes - 4 o'clock.

After each weekly rehearsal, the facilitators engaged in short reflective reviews about the sessions. These conversations were informal in nature and

usually focused on how the facilitator felt about the session, such as how it worked and if there were ways to make it more meaningful and inclusive for the students. The outcomes of these discussions informed both the individual lessons at both schools and the band rehearsal the following week. Collaborations between the classroom teachers and the facilitators also took place. At the beginning of the project, following the recruitment phase and before the weekly sessions, the facilitators and the classroom teachers met specifically, regarding how best to implement inclusive practices within the weekly lessons and rehearsals. This meeting involved discussions about each student in the Till 4 band. Further collaborations and discussions were more sporadic, as there was a distinct lack of time for face-to-face communication. I created a Google document and shared it with all facilitators and classroom teachers, in an attempt to bridge the communication gap digitally. This document provided a space where facilitators could input information about the project and classroom teachers could respond with suggestions for further inclusion.

Collaborations between Till 4 facilitators and SDC classroom teachers mainly focused on the use of DMIs in the classroom. SDC staff and students had previous experience of creative collaborations that involved the use of DMIs. As part of Cork's designation as European Capital of Culture in 2005, SDC engaged in a range of music technology workshops with CMW. These workshops introduced a range of DMIs and resulted in Muireann O'Shea, the SDC classroom teacher, using MIDI Creator in her classroom in 2005. The school purchased Soundbeam 2 in 2008, with support from CMW, as part of the national funded award programme, Allied Irish Bank Better Ireland Awards. As

a result of this award, I worked with SDC from 2008-2011. As part of my role as a music educator, I developed a music programme that explored a range of DMIs to make the wider curriculum accessible for students. In 2010, SDC purchased DTSB - a digital version of Soundbeam. When the Till 4 band was established, I continued to provide ongoing support to the staff at SDC in order to facilitate the creative use of DMIs in their classrooms. This support enabled the classroom teachers to facilitate the Till 4 students to practice for rehearsals and performances. The technological setup for Till 4 was more complex in comparison to that used in Circles. In the following section, I describe the setup for Till 4 and the necessary adaptations employed to enhance meaningful engagement for the DMI players.

Till 4 Technology Setup and Adaptations

The Till 4 band members explored and played a variety of instruments (drums, keyboard, saxophone, guitar, bass guitar, Soundbeam, Magic Flute, iPads) and styles (popular, world, jazz, country and classical). In Figure 24, I provide an overview of the technology and instruments used in the band.

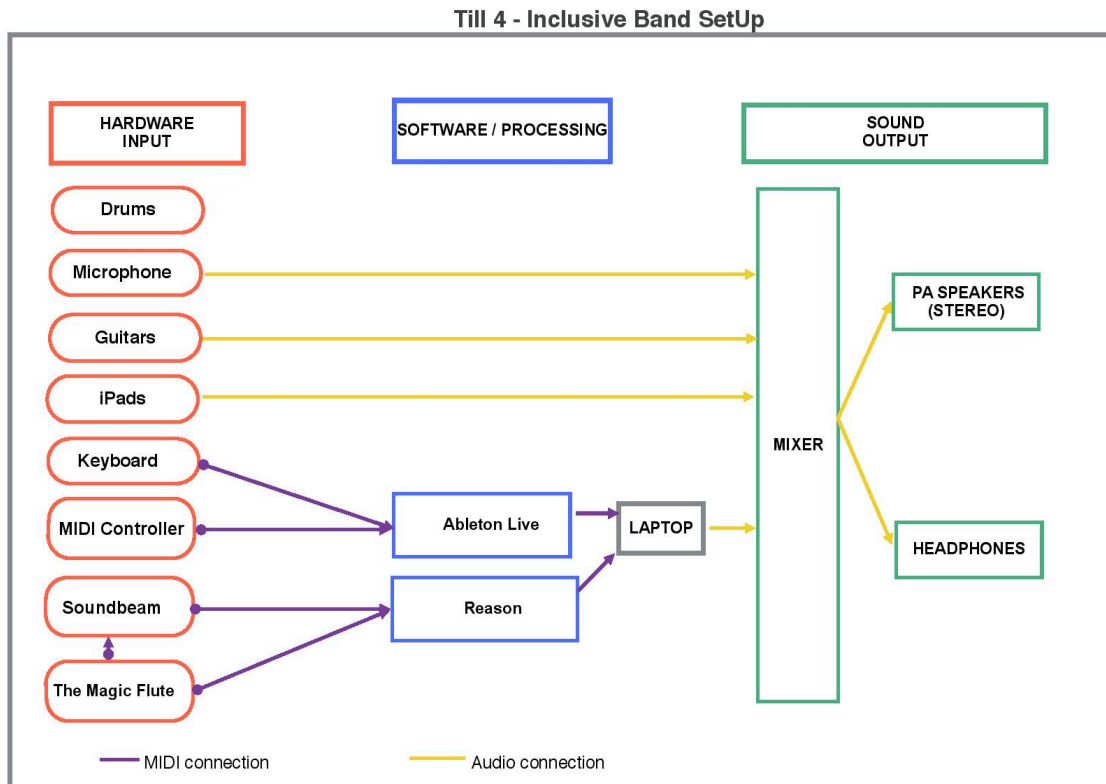


Figure 24: Till 4 Band Setup

The red boxes in the above visual representation refer to instruments, including DMIs, the blue boxes represent the sound generation software and the green boxes are the sound output. The yellow lines are the audio connections and the purple lines are the MIDI connections. More MIDI connections are discernible in the Till 4 setup, in comparison to Circles, as more DMIs were used.

Both DTSB and Soundbeam 5 were used in Till 4 band.¹⁵⁹ The Soundbeam 5 is the latest version of the Soundbeam system and is comprised of a standalone system considered more user friendly, particularly by non-specialists, than the

¹⁵⁹ MGCC purchased the latest version of Soundbeam 5 for use on the Till 4 project.

previous version, DTSB. The Soundbeam 5 was stored at SDC in order that the classroom teachers could access it easily to facilitate student's practice between the weekly Till 4 band rehearsals. The DTSB was used by Till 4 facilitators for weekly rehearsals at TMS and during performances. Similar to the Circles project, the DTSB was used with sound generation software - Reason and Ableton Live - which enabled access to high quality sounds. During weekly lessons, students collaboratively created chords and note sequences, which Till 4 facilitators subsequently inputted into both Soundbeam systems.

The main Soundbeam user in the band was John O'Shea. John received individual performance tuition and music theory classes at SDC each week, in addition to his involvement in Till 4. The process of creating note sequences and chord progressions, took place during this time. The compositions were subsequently performed by John during the weekly band rehearsals, and rehearsed again with his classroom teacher using Soundbeam 5. John used the beam to perform improvisations in the band. Similar to Cillian in Circles, John mainly used a pentatonic scale when improvising with the beam. These improvisations were often performed in conjunction with the iPad. John used the digital guitar instrument in the Garageband application to perform backing chords to the songs played by the band. The chords in this application can be manually chosen using the 'edit chords' option in the settings. All DMIs in Till 4 were incorporated as both musical instruments and compositional tools within the band. The iPads, particularly the Garageband application, were also used as recording, performing and compositional tools by all the students.

When using the iPad, John used colours to differentiate between chords - an approach that was inspired by the 'Figurenote' system, which uses colours instead of letters to identify musical notes (Kaikkonen, M, 2015). Danielle also incorporated a colour system to distinguish between chords on the digital piano and she received individual keyboard classes at SDC. She primarily used a conventional keyboard to play chords and simple melodies with the band. She also used a MIDI keyboard, connected to Ableton sound generation software. Connecting a MIDI keyboard to Ableton opened up a range of new digital sounds for use within the band. This MIDI keyboard could be played in the same manner as a conventional keyboard, however it was also possible to reconfigure it to trigger predetermined sounds and notes, similar to the Soundbeam. Pressing notes on the MIDI keyboard could trigger these sequences. Often a Till 4 facilitator arranged a pentatonic scale for triggering, which afforded greater scope for Danielle to improvise within the band.

The use of DMIs was not restricted to students from SDC. Both Darren from TMS and Cian from SDC learned basic drumming patterns using the iPad's Garageband application. While both Cian and Darren chose to use the DMI as a useful learning tool, they both elected to play the acoustic drum kit more often.

Similar to the other Till 4 members, Shauni received individual tuition outside of the band rehearsals. During this time, she tried a variety of DMIs including the Magic Flute and the Roland Wx5 Wind Synth. The Magic Flute, similar to Soundbeam, features an option to input predetermined sets of notes. A pentatonic scale was advantageous for most activities, as it provided Shauni with the opportunity to improvise. Shauni highlighted that she liked playing wind

instruments so the Till 4 facilitators progressed to trying out the Roland Wx5 wind synth and a saxophone, which she often used during band rehearsals. Shauni also sang in the band.

Inspired by the inclusive practice in Till 4 and Circles, I established a third inclusive band called Mish Mash, in response to a request from a group of young adults with disabilities for more inclusive music making and learning opportunities in Cork city.¹⁶⁰ In the final section of this chapter, I outline the inclusive structure of Mish Mash, where I describe the recruitment process and introduce the seven members and two facilitators. I also refer to the funding and resources that made the facilitation of Mish Mash possible, along with presenting a description of the technology setup and adaptations in the band. Finally, I provide insight into the collaborative, informal and creative processes undertaken by Mish Mash members to create new electronic music.

Mish Mash- November 2012 - June 2014

I established Mish Mash¹⁶¹ in November 2012, in partnership with the FUAIM Music and Community initiative at UCC SMT. Mish Mash involved a UCC SMT composition student and six adults with disabilities from various disability service centres Cork city¹⁶².

¹⁶⁰ Many of the individuals I worked with through my community music practice at Enable Ireland disability services and with CMW, initiated the request to develop Mish Mash.

¹⁶¹ Please refer to Clip 11- Mish Mash on the SoundOUT Inclusive Music Bands DVD for a snapshot of Mish Mash activities during this research period.

¹⁶² Mish Mash members attend Enable Ireland disability services, Brothers of Charity and the COPE Foundation disability service centres in Cork city on a daily basis.



Figure 25: Mish Mash Inclusive Music Band

Mish Mash Structure

The structure of Mish Mash, as an inclusive music band, evolved in response to requests for more inclusive music making and performance opportunities, from members of various disability services, particularly Enable Ireland disability services in Cork city and past members of CMW. The inclusive structure of the Till 4 band and Circles inspired many young people to come forward looking for more music making and learning experiences within mainstream settings. A core objective of the Mish Mash band was to explore the inclusive and creative potential of DMIs to collaboratively compose and perform new electronic music in community settings. DMIs used by Mish Mash included The Magic Flute, Soundbeam Technology, and a Roland Wx5 Wind Synthesiser. A range of iPad applications, including Garageband, iKaosiallator and iVoxel, were also used, both as composition and performance tools.

Recruitment

There were seven band members in Mish Mash. Six members of the seven members had multiple disabilities. The majority attended various disability

service centres throughout Cork city. The seventh member was a music composition student from UCC SMT. Three of the members with learning difficulties, Karl, Aoife and Riobard, previously attended the CMW SAMBA band from 2002 – 2011. During this time, they were involved in a range of performances both in Cork city, in prominent venues such as Cork City Hall, the Curtis Auditorium at the CIT CSM, as well as a special performance at the annual Garden Party at Áras an Uachtaráin for President Mary McAleese. When CMW ceased activities in 2011, Karl, Aoife and Riobaird, requested further inclusive music making and performance opportunities to be developed. This led me to the establishment of Mish Mash. The three other members with both physical disabilities and mild learning difficulties (Jenny, Christine and Kevin) became involved in Mish Mash after taking part in a group music-making programme I facilitated at Enable Ireland disability services. Through FUAIM Music and Community recruitment processes at UCC SMT, a music student (Aideen) became involved in Mish Mash.¹⁶³ Aideen wished to gain experience in using DMIs for creative music making and performance. All members joined Mish Mash in 2012 on a voluntary basis. The constitution of the group evolved from an interest in DMIs and creating new electronic music. In the section below, I introduce each Mish Mash member.

¹⁶³ Between 2011 and 2014, the FUAIM Music and Community programme supported 81 students to develop creative and collaborative work with diverse community organisations throughout Cork city. SoundOUT was a partner of this community engagement programme and involved many SMT students in various project throughout the city.

Members of Mish Mash

Aoife O’Sullivan was 21 when she joined Mish Mash and was a service user of COPE Foundation, a day support centre for adults with disabilities in Cork city. Aoife has an eclectic taste in music and brought diverse musical interests to the group. She was a member of CMW between 2005-2011, where she fostered a strong interest in rap and hip-hop music.¹⁶⁴ All of Aoife’s family play classical music and when she joined Mish Mash, she expressed an interest in playing the keyboard and the flute, like her brother Emmett, who is currently a student at the CIT CSM. Aoife rapped, sang and played the keyboard and the Roland Wx5 wind synth in the band.¹⁶⁵ Aoife was also a successful applicant on the UCC, Certificate for Contemporary Living (CCL) Course - a third level certificate for adults with disabilities. As part of the course requirements, she undertook work placement with SoundOUT and completed the CCL course in May 2014. She is also a gymnast and recently won a gold medal at the Special Olympics World Games in Los Angeles, July 2015. Aoife is an enthusiastic and motivating member of the Mish Mash band.

Karl Murphy was 43 when he joined Mish Mash. Karl has mild learning difficulties and he attends day support services at the COPE Foundation.¹⁶⁶ He is very involved in his local community, particularly local choirs and the GAA club. Karl comes from a very musical family where many of his brothers and

¹⁶⁴ CMW members, including Aoife, collaborated with local rap artist, Garry McCarthy, over a 3-month period in 2008.

¹⁶⁵ I taught Aoife keyboard outside of Mish Mash rehearsals and I also sourced the Roland Wx5 wind synth and provided her with tuition in it, during these individual lessons.

¹⁶⁶ He has been based at the COPE Foundation since he went to school and has not worked outside of the COPE services to date.

sisters are professional musicians. He has a strong passion for music, particularly singing and playing the piano.¹⁶⁷ Karl was one of the original members of CMW, joining in 2002. Karl is an excellent singer and he has performed in various venues throughout Cork city including Cork City Hall, CIT CSM, UCC Aula Maxima and the Cork Opera House. When he joined Mish Mash, he assumed a helping role and I subsequently created the workshop assistant position, which he undertook fervently. This role involved helping to set up equipment and supporting member's arrival to the room. For example, Karl was responsible for meeting one member, Christine, at her taxi and accompanying her to the workshop space. He also played the keyboard and sang in the band. In May 2014, Karl represented Ireland at the European Song Festival in Stockholm Sweden. He is also currently undertaking FETAC Level 5 music appreciation at City North College with SoundOUT.

Riobard Lankford was 24 when he joined Mish Mash. Riobaird has moderate learning disabilities but he does not attend a disability day service centre, unlike the majority of Mish Mash members.¹⁶⁸ He was a member of CMW from the early 2000s, where he was involved in the SAMBA band and other performance project. Riobaird was a key Soundbeam performer in the 'Somewhere Over the Rainbow' inclusive arts project I developed as part of my final year undergraduate studies at UCC SMT in 2006. He also performed Soundbeam with the Cork Pops Orchestra as part of the European City of Culture 2005 in Cork City Hall. Riobaird is an enthusiastic, fun and inspiring member of

¹⁶⁷ He learned to play the piano when he was younger but gave up after three years. He started to play the piano again when he joined Mish Mash.

¹⁶⁸ Riobard works part-time in a local hotel as a catering assistant.

Mish Mash. He mainly uses his iPad to create and perform music with the band.

Jenny Garde was 23 when she joined Mish Mash in November 2012. She was not previously involved in CMW activities, unlike Karl, Aoife and Riobard. Jenny has cerebral palsy and mild learning difficulties and she attends the Enable Ireland disability services centre, daily with Cillian McSweeney from Circles. She was a participant in the group music-making project I facilitated at Enable Ireland in 2012. She is also a member of the Ireland Paralympics Boccia Team and has received several All-Ireland medals for this sport. She is a fan of Circles and has acknowledged Cillian as an inspiration for her musical ambitions. Jenny attends Mish Mash on a weekly basis with support from her mother for the music sessions. Jenny uses a communication book regularly as well as her iPad, as communication aids. She primarily plays the Soundbeam and her iPad in Mish Mash.

Kevin English was 23 when he joined Mish Mash and was also a service user at Enable Ireland disability services. Unlike Karl, Aoife and Riobard, Kevin did not attend CMW. However, he was involved in an inclusive arts project I developed during the spring of 2012. This project, called 'Dreams' brought together 5 artists, members of Enable Ireland and members of the Cork Academy of Music, to create and perform a new digital arts performance piece. During this project, Kevin worked closely with rap artist Garry McCarthy (GMC). He also explored the use of various DMIs for creative music making such as the iPad, Magic Flute and Soundbeam. This involvement sparked an interest in creative music making for Kevin, which led him to Mish Mash in November of that year. Kevin has limited movement in one arm and has mild learning difficulties. He

completed FETAC Level 3 and is currently undertaking FETAC Level 5 music at City North College. Kevin is a keen country music fan. He sings, uses the iPad, plays bodhrán and plays the Magic Flute in Mish Mash.

Christine Haughey first became involved with SoundOUT through an inclusive music project, which emerged from collaboration with the TMP. This project took place every Monday between September – December 2011. The project was similar to the inclusive band project that Cillian was involved in with the KYMI during that period. However, due to personal circumstances and travel challenges Christine was unable to continue, as she had to travel from Skiberreen, a rural part of Cork, every week with her PA, Helen. During 2012, Christine moved to Cork city as part of an Independent Living Scheme and sought to rejoin SoundOUT. She became a member of Mish Mash in November 2012. Christine has muscular dystrophy resulting in profound physical limitations. She is an electronic wheelchair user and she uses the controls on her wheelchair to control DMIs such as applications on her android tablet. She also plays Soundbeam technology in the band.

Aideen Carroll was a Masters student at UCC SMT and studied composition under Jeffery Weeter and John Godfrey in 2012. She had a strong interest in both improvisation and electronic music and was eager to explore these areas further with the Mish Mash band. She first became involved in Mish Mash in September 2013. She played clarinet with the group and explored accessible ways to make music using found sounds¹⁶⁹. Aideen was also a

¹⁶⁹ Found sounds refer to sounds of natural objects rather than from any specifically designed instruments.

member of the Computer Audio Visual Band (CAVE) developed at UCC for the FUAIM music festival in March 2014. CAVE created and performed original electronic music using a range of custom made DMIs.¹⁷⁰ Upon completion of the MA in Composition, Aideen planned to undertake a second MA to study music therapy at University of Edinburgh.

All of the Mish Mash members brought previous musical experience and their unique musical tastes to the group. At the beginning of the project, as well as throughout the term, each member expressed their aims and ambitions for involvement in the group. I developed activities that responded and adapted to these goals, in order to make involvement as meaningful as possible for each member.

Mish Mash Facilitators

I was the sole band facilitator for Mish Mash between, November 2012 and June 2013. Once-off workshops with local rapper and music producer GMC also took place during this period. Between January 2013 and June 2014, Graham McCarthy, the facilitator from the Circles project, also became involved in Mish Mash in a supporting capacity. During this period, Graham learned the specific setup and technical requirements for Mish Mash. Since January 2014 Graham and I have worked together to support the band to create new work, combining both our musical and technical expertise. As well as acting as facilitators, we were afforded ample opportunities to creatively contribute to the group music making, while learning new technical skills. As part of his MSc in Music and

¹⁷⁰ The performers in CAVE created DMIs from scratch to perform their music.

Technology at the CIT CSM, Graham began exploring the creative potential and limitations of DMIs used in Mish Mash. His research focused on developing new accessible interfaces for DMIs, with a particular emphasis on the use of eye gaze technology. There were two roles for facilitators within the band – the first concerned group facilitation while the second role was technical in nature. We both engaged and moved between these roles regularly. Graham's exploration into DMIs and interactive software was an immense support in the Mish Mash band, as well as within the other two inclusive music bands: Till 4 and Circles. In the section below, I present the funding and resources that were necessary to support the development of Mish Mash.

Mish Mash Funding and Resources

Mish Mash rehearsed at UCC SMT every Monday evening from 6:00-7:30pm. For the initial stages of Mish Mash development funding was made available by the arts department at the HSE, southern services. This funding enabled me to work with Mish Mash as a band facilitator for two hours over a twelve-week period, as well as facilitating once-off workshops with rapper GMC. Equipment for the project, including DTSB, The Magic Flute and the Roland Wx5 wind synth, was kindly on long-term loan from SoundOUT's predecessor CMW. Since November 2012, all Mish Mash members paid a small membership fee to contribute partially to the upkeep of equipment, such as leads. Once the HSE funding finished in February 2013, each member increased this membership fee to include a small payment for band facilitators.

Partnerships, Performances and Networks

The development of partnerships and involvement in various networks has significantly supported the evolution of Mish Mash. The group have performed their music at festivals and local nightclubs since their formation. Collaborative workshops and projects also took place with various artists including hip-hop artist and rapper GMC and members of the Cork Symphony Orchestra. Mish Mash have performed in venues across the city including the Stack theatre and the Curtis auditorium at the CIT CSM, the Aula Maxima as part of the FUAIM concert series at UCC SMT, Mad Pride Festival in Fitzgerald's Park and as part of the Life Long Learning Festival in 2012 and 2013.

In January 2014, Mish Mash also developed a partnership with the mechanical engineering department at CIT and MGCC. This partnership brought together two students from CIT and Mish Mash to attempt to adapt and/or create new interfaces for DMIs to expand opportunities for creative music making. James Fogarty worked with Mish Mash band member Jenny, to develop a more flexible interface for her to create and perform music independently. This was a very successful collaboration, which resulted in Jenny now using an adapted interface specifically designed for her needs. James received the International Vicon Best Undergraduate Medical Award 2015 in London for this project.

Representing SoundOUT including all three inclusive bands Mish Mash, Circles and Till 4, I am an executive board member of Cork's MEP. I am also a steering group member of the Cork Arts and Disability network and the Cork Community Music Network. This provides opportunities for SoundOUT to become involved in local events, as well as contribute to local and national

policy developments relating to Arts and Disability issues in Ireland. In September 2015, Mish Mash were involved in a collaborative arts project as part of the IGNITE initiative. The IGNITE initiative is Ireland's largest investment in the Arts and Disability sector, providing €60,000 to develop new inclusive arts work. SoundOUT, in particular Mish Mash, is a key partner in the development of this new creative work with artist Simon McKeown from the UK. McKeown aims to 'create, with my partners, a hugely exciting body of work in Cork and for this work to be seen as a fundamental stepping stone in the perception and production of art which touches on, or considers disability.' (McKeown, 2014). This work was shared with the wider community as part of Culture Night 2015 in Cork city. There are also plans to tour this work in three locations in Ireland (Dublin, Mayo and Galway).

Through the work with Mish Mash, I continue to develop partnerships and become involved in diverse networks to further opportunities for inclusive and meaningful music making for its members. In the following section, I describe the various processes and technology adaptations undertaken in Mish Mash to support members to collaboratively creative and perform their music.

Mish Mash Creative and Collaborative Processes

Reflecting the processes in Circles and Till 4, I developed Mish Mash activities through informal, collaborative and creative approaches. In contrast to the two earlier inclusive bands, Mish Mash solely focused on the development of new music and mainly used DMIs for music making.

In order to create an original piece of music, Mish Mash members usually began

by developing a rhythm. They often used acoustic beats where Kevin would play his bodhrán. Otherwise, they would collaboratively create an electronic beat using a combination of recorded samples and/or MIDI controllers. When establishing a beat using samples, the group engaged in a specific recording and editing process. This process was developed, both by the group and the facilitators and consisted of a range of jobs: an organiser, a performer, a recorder and an editor.

The organiser was the person designated to ask everyone in the room to be quiet before the group began the recording process. They subsequently asked the performer and the recorder ‘are you ready?’ Once each person was ready, the organiser counted to 4 to prompt the recorder to start recording and the performer to start performing. Members with communication difficulties used a range of augmented or alternative communication methods such as Lámh sign system or Dynavox. The performer was the person who located a sound that they felt would sound good as part of a beat and then explored various approaches to playing the sound. Once prompted by the organiser, they performed the sound. The recorder was the person who set up the software (Ableton or Garageband application on the iPad) for recording the sounds and they were required to carry out a list of steps. For example, the recorder opened Garageband; found the audio recording option; moved the cursor to beginning of track; tested the audio levels; adjusted levels if light went beyond number 4 position on the recording monitor or went red; pressed record (red circle) once prompted and pressed stop (white square) once sound stops. The editor referred to the band member who edited the recorded audio. For instance, they used the split tool to select the parts of the

sound that they wanted to keep and to delete extraneous portions that they didn't want.

When the recording and editing processes were completed, the group collaboratively arranged the samples in order to create beat sequences. This beat sequence was usually created over four bars, where the samples were dragged, dropped and arranged. The snap option in Garageband was used to place the samples in a position that automatically synchronised with the pulse of the beat. This snap option made the arranging process more accessible for Mish Mash members to carry out independently. Band members finally looped the beat and it then served as a base of the musical piece. Occasionally the group created and used more than one beat within a piece. Once a beat was created, the group decided on a key, in order to create notes and chord sequences for their piece.

Fun and collaborative activities were used to enable band members to choose note sequences and chord progressions. David Bowie's experimental lyric compositional technique ('cut-up') was an inspiration for the developments of note sequences, rhythms and chords (Bowie, 2015). This involved writing various notes on pieces of paper, throwing them in the air and randomly collecting them. The order often formed the basis of a melody or inspired chord progressions in Mish Mash. These melodies and/or chord progressions were often arranged into two layers that formed a musical piece. The bottom layer incorporated solid rhythmic and melodic sequences. These sequences were usually performed by members who were more proficient on their instrument at keeping in time with the overall pulse. In many pieces, Karl played chord and melodic sequences on the piano. Aoife played melodies on the Wind Synth and

Kevin contributed to rhythmic aspects of a piece with his bodhrán or other percussive instruments. The upper layer of the musical piece often involved improvisatory elements. Musicians with more melodic instruments such as the Soundbeam, iPad and the Magic Flute played these parts. These DMIs have the capabilities to program pentatonic scales for improvisation. Riobaird played the iPad, mainly the iKorg. Jenny and Christine often used a combination of the Soundbeam and the Garageband application on the iPad for improvisation activities. Informally assessing the musical strengths of each member, as well as assessing musical progression routes was an important element of arranging a Mish Mash piece. Also supporting the conscious creativity as well as capturing the unconscious creative moments of the band members was an element in the creation of all pieces.¹⁷¹

When working on the final arrangement of a musical piece, it was important, particularly during the early stages of the project, to have a conductor that would support the band playing together and provide indications for moving between sections of pieces. As the group became more confident, they needed less conducting and naturally played well together. In the next and final section, I describe the specific technology setup and adaptations that were undertaken for both the Mish Mash rehearsals and performances.

Technology Setup and Adaptations

There was a range of DMIs used in Mish Mash to make and perform music.

¹⁷¹ When members came into the room they would start to explore the various instruments. As facilitators we always had recording equipment in the space to capture any unconscious moments of creativity that could contribute to a piece of Mish Mash music.

Below is a visual overview of the technology setup for the Mish Mash band.

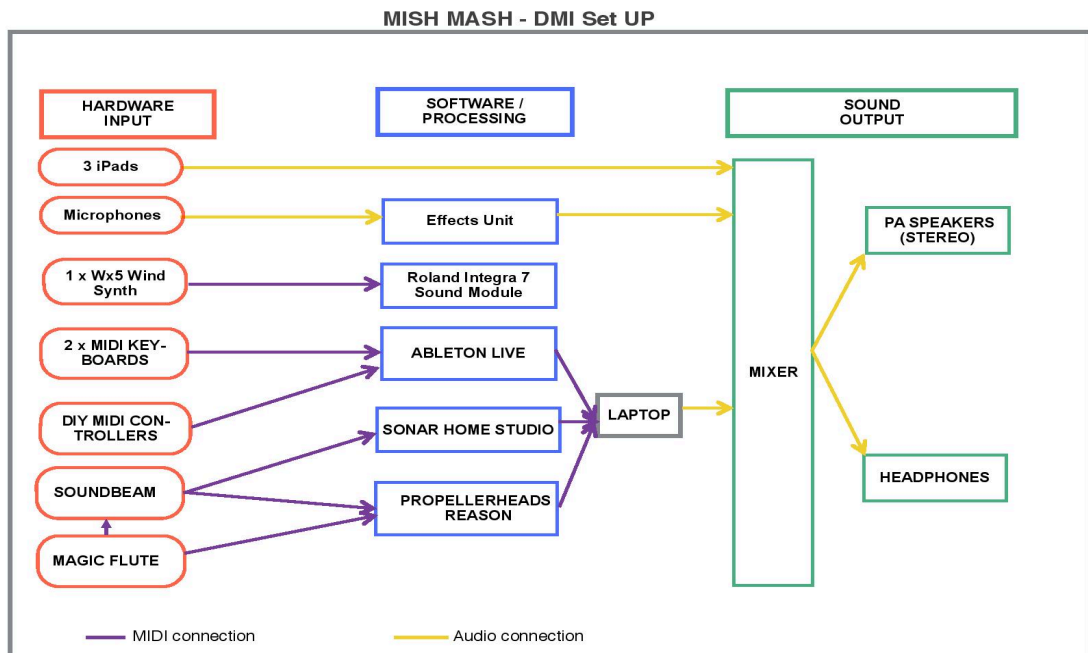


Figure 26: Mish Mash Band Setup

As with the technology setup for Circles and Till 4, this figure outlines the various sound and MIDI connections in the band. As can be seen from the amount of red boxes, Mish Mash featured a greater number of DMIs, including Soundbeam, Magic Flute, Roland Wx5 Wind Synth, keyboards and other MIDI controllers, in comparison to Till 4 and Circles. A broader range of sound generation software was also experimented with in Mish Mash. The sound and MIDI setup was continuously adapted to address the specific needs of Mish Mash.

As can be seen from the amount of purple MIDI lines in the visual, each controller was linked to sound generation software via MIDI. This enabled each controller access to an extensive palette of sounds. The sound generation on the

laptop acted as a type of hub where all sounds were mixed. The sound was sent via stereo out to a mixer. The iPads were connected separately via audio channels to the same mixer that the laptop was connected to. A range of microphones were used to amplify voices in the group and other acoustic instruments. Occasionally conventional instruments were incorporated and adapted to render new sounds. For instance, the band adapted an acoustic guitar by connecting it to an effects unit. This opened up a new space for creative expression for the members. Another example is the bodhrán - when used with an effects unit. All of these instruments were connected through a single sound output unit.

Each member initially tried out a variety of instruments in order to choose which instrument to play. Similar to Circles and Till 4, the available gestures of each Mish Mash member were analysed at the beginning of the project. The most appropriate DMI was subsequently chosen and adapted for that individual, in order to facilitate the widest possible parameters for expressive music making and learning. Similar to the Till 4 band in particular, the setup of the equipment takes approximately 30-40 minutes before and approximately 20 minutes to take down after each session. Similar to the Till 4 band, some of the members of Mish Mash became actively involved in the equipment setup every week.

Chapter Reflections

In this chapter, I provided an insight into the structure and pedagogic processes in each of the three inclusive bands in this study. I specifically described the inclusive structure, the resources including funding, and partnerships that were

necessary for the development of Circles, Till 4 and Mish Mash. I also described the informal, collaborative and creative processes undertaken in each setting along with the technological setup and adaptations for each band.

This in-depth description provides a platform to engage with the findings and theoretical discussions in the following two chapters. In Chapter 7, I outline the relationships and developments in each of the three inclusive bands from an ecological perspective. In Chapter 8, I provide an analysis of the findings relating to the experiences of using DMIs for meaningful music making and learning within these bands, along with the conditions necessary to foster inclusive music practice in Cork city.

Chapter Seven

An Ecological View of SoundOUT Inclusive Bands

Introduction

In this chapter, I provide an outline of the micro and macro partnerships that evolved during the development of each of the three inclusive bands in this study - Circles, Till 4 and Mish Mash. I map these partnerships, previously described in Chapter 6, using the five interrelating systems in Bronfenbrenner's Model of Social Ecology.¹⁷² In each band, the innermost system, the microsystem, involved direct and regular interactions between individuals using the DMIs (developing individuals), and significant people such as parents, personal assistants, other band members, classroom teachers and band facilitators. The next outer system, the mesosystem, encompassed key individuals from the microsystem interacting with each other, without the presence of the developing individual, for example, interactions between band facilitators and parents, parents and classroom teachers and so forth. The exosystem consisted of relationships with groups, organisations and individuals that did not directly involve the developing individual, however, their activities indirectly impacted the individual's musical development, for example, technological developments in educational institutions and funding bodies strategic plans. The macrosystem of each band incorporated the social, cultural and economic climate, which

¹⁷² The five systems are the microsystem, the mesosystem, the exosystem, the macrosystem and the chronosystem (Bronfenbrenner, 1986).

existed during this research period. The ideologies in this outer system such as those of inclusion, democracy, equality and social justice, influenced a range of inclusive policy developments in both social and educational settings, indirectly influencing the inclusive music practice in this study. For example, the creation of the New Directions strategies in 2012 for disability services in Ireland encouraged more individuals with disabilities to follow their ambition of music making and learning.¹⁷³ The chronosystem refers the period of time in which these developments occur. The timescale for the fieldwork phase of this research was 2011-2014, where particularly developments, ideologies and economic conditions influenced practice.

I begin this chapter by charting the partnerships that evolved during the development of Circles. Cillian McSweeney was the only individual using a DMI in Circles to make and learn music, so the partnerships are presented from his position as the developing individual. I use Bronfenbrenner's Model of Social Ecology as a framework for these relationships. Figure 27, below, is a visual representation of this process and the subsequent table (Table 8) summarises these interactions.¹⁷⁴

¹⁷³ New Directions was published by the HSE in 2012. This report sets out a new approach to day services that envisages all the supports available in communities will be mobilised so that people with disabilities have the widest choice and options about how to live their lives and how to spend their time.

¹⁷⁴ The colours and numbers in the visual representation of Circles partnerships, relate to the colours and numbers in the spine of the subsequent table.

An Ecological View of Circles

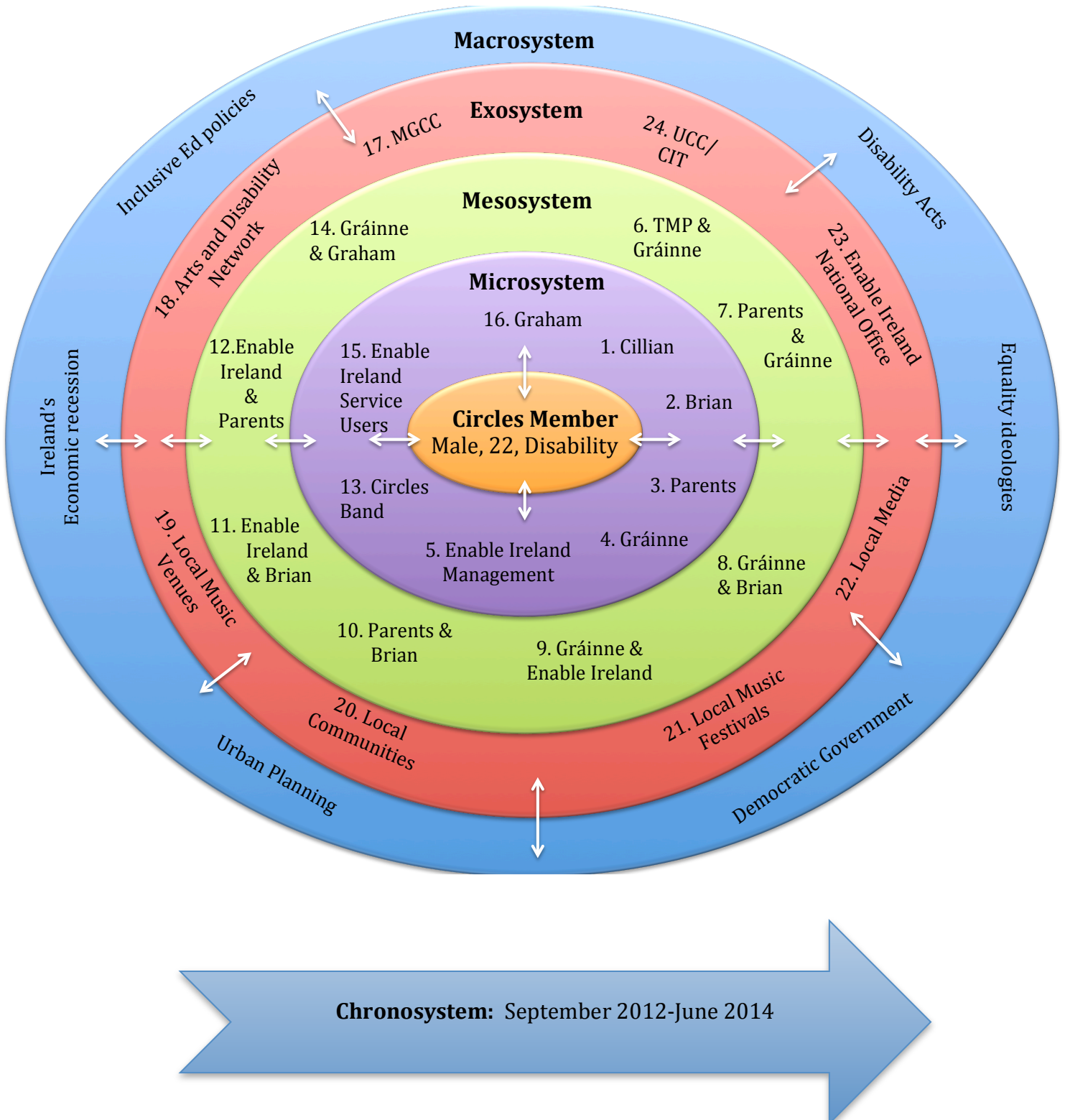


Figure 27: An ecological view of Circles

	An Ecological View of Circles
1.	Cillian instigated the process of establishing Circles. He requested the development of another inclusive band, after the closure of KYMI, in order to further enhance his ‘capabilities’ of making and learning music.
2.	In order to make this request, Cillian first contacted his PA, Brian O’Donovan.
3.	Together they contacted Cillian’s parents, Angela and Tom, to discuss possibilities of music making opportunities beyond his day support services at Enable Ireland.
4	Brian and Cillian subsequently got in touch with me to explore new possibilities for music collaborations, with a view to establish a new inclusive music band in the city.
5.	Simultaneously Cillian met with his person-centred planner at Enable Ireland to discuss the practicalities of establishing a new band in collaboration with SoundOUT, outside of Enable Ireland services.
6.	With Cillian and Enable Ireland’s approval I began contacting local music education projects to look for potential collaborators. I got in touch with the Togher Music Project (TMP) to explore regular inclusive music making activities that would involve Cillian.
7.	Once the TMP agreed to collaborate, I contacted Cillian’s parents to discuss what supports Cillian would need, for example, personal care support, communication devices and transport.
8.	As Brian, provided assistance to both Cillian and other service users from Enable Ireland, he also provided advice about setting up a project that incorporated the necessary support for Cillian.
9.	This led me to a discussion with Enable Ireland to negotiate transport issues and learning support for Cillian. Unfortunately there were many limitations in the support Enable Ireland could offer, which led to further discussions with Cillian’s Parents regarding these issues.

	An Ecological View of Circles
10.	Angela, Tom and Brian suggested that Cillian use his allocated three hours of PA support for social activities from Cork Independent living Scheme ¹⁷⁵ to support him in this project.
11.	This solution was brought to Enable Ireland, however Brian's work timetable at Enable Ireland clashed with the available times at the TMP.
12.	After long discussions between Cillian, his parents and Enable Ireland, in order for the project to progress, Cillian's parents agreed to provide transport and PA support for Cillian themselves.
13.	With all of these practicalities taken into consideration, Circles was established.
14.	During the initial recruitment process at TMP, I identified Graham as a potential music facilitator as during the planning stages of Circles, he showed an interest in DMIs and leadership qualities that are both essential in this area. We discussed potential options for him to learn about DMIs and various group facilitation techniques. He agreed to shadow my work for approximately three months.
15.	As the project evolved, Cillian invited friends from Enable Ireland Disability Services centre to attend performances and events. This led to a lot of service users becoming supporters of Circles. Also it was a catalyst for Enable Ireland Service users to attend music classes in the centre, where they previously would have shown no interest.
16.	In January 2013, Graham began as the band facilitator for Circles. He gradually took over the contact with Cillian, his parents and PA worker.
17.	Circles received ongoing funding from Music Generation Cork City (MGCC) which is managed by the Cork ETB in Cork city. This funding enabled Graham to facilitate the weekly music rehearsals and individual lessons with Cillian.

175 Cork's Independent Living Scheme aims to empower and enable people with disabilities to achieve Independent Living, choice and control over their lives and to achieve full and active participation as equal citizens in society. They allocate funding to employ PAs for individuals with disabilities.

	An Ecological View of Circles
18.	Circles were asked to perform at Culture Club in City Limits Nightclub in Cork city. This club was an accessible nightclub run for and by people with disabilities and was facilitated by the Arts and Disability Network in Cork city. Being involved in this club provided opportunities to connect with other performing groups from the UK and Cork city that included musicians with disabilities.
19.	The performance in City Limits, led Circles to explore the possibility of performing in other music venues around Cork city. This process highlighted the lack of accessibility of music venues in Cork city.
20.	Advocacy through public workshops, seminars and performances brought awareness to inclusive music making and learning to a wide range of groups in Cork city, particularly to Cillian's local community. He was subsequently awarded the Wilton Community Achievement Award.
21.	Performance took place at various festivals in Cork city including Cork LifeLong Learning Festival and Mad Pride Festival.
22.	There were a variety of news features about Circles on national television and radio broadcasters (RTE and TV3), as well as national and local newspapers in order to advocate for more inclusive music making opportunities for people with disabilities in Ireland.
23.	Enable Ireland also began to undertake independent short-term projects with Cillian through their National Assistive Technology department at Enable Ireland.
24.	SoundOUT began collaborations with local educational institutions to develop new technologies that would enhance meaningful engagement in music making and learning. Learning from Cillian's experience of making and learning music using a DMI, students from CIT CSM developed new hardware and software for creative music making.

Table 8: An ecological view of Circles

The catalyst for the development of Circles began with Cillian, in the

microsystem. The band gradually evolved through relationships being developed within the mesosystem, for example, interactions between Brian, (Cillian's PA), Cillian's parents, Enable Ireland staff, and I. Developments in the exosystem also impacted on the evolution and sustainability of Circles, for example, the availability of funding from the Cork City Arts Council and Music Generation Cork City (MGCC). These interactions and developments were influenced strongly by ideologies, such as inclusion, filtering down from the macrosystem. A central aim of Circles was to develop inclusive practice within the inner systems (micro and meso systems) in order to influence developments in the outer systems for example DMI innovations in the exosystem.

Figure 28 is an ecological representation of the relationships that evolved in the Till 4 project. Table 9 is a brief description of these interactions. It is presented from the position of one of the band members with disabilities using a DMI, as an example of the developing individual in Till 4.

An Ecological View of Till 4

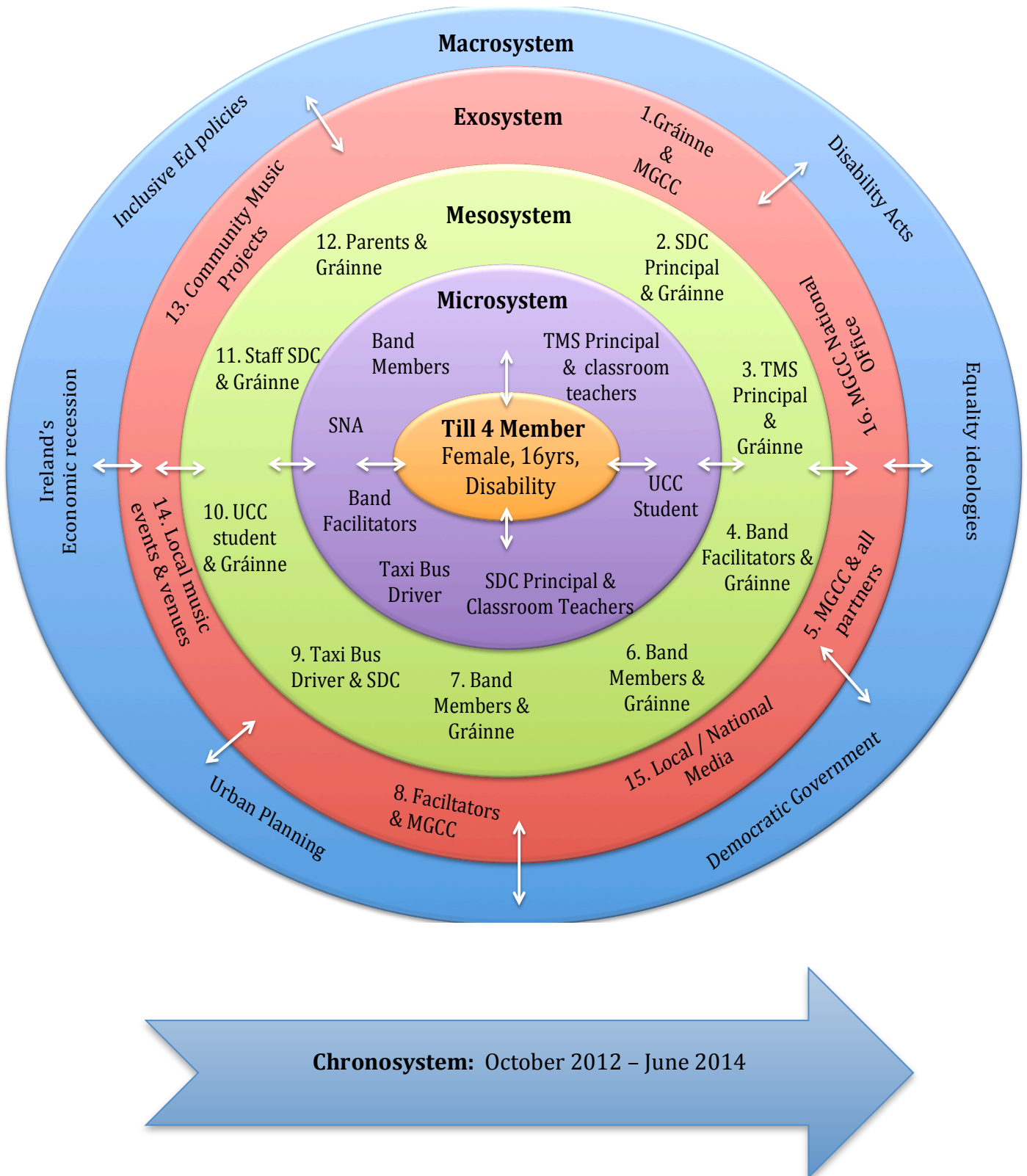


Figure 28: An ecological view of Till 4

	An Ecological View of Till 4
1.	Inspired by the success of Circles, Margaret O’Sullivan, coordinator of MGCC and I, representing SoundOUT, came together to discuss possibilities for an inclusive music programme, facilitated by SoundOUT in a variety of schools in Cork city.
2.	I approached SDC, a local Special Educational Needs (SEN) school that provides education to young people with disabilities between the ages of four and eighteen. I had an initial meeting with the principal of the school and the classroom teacher at School of the Divine Child. As this was the school Cillian from Circles attended, the staff and students were aware of inclusive music practice and expressed an interest in developing a school-based model. Discussions took place around the inclusive potential of the project and the specific needs of SDC staff and students.
3.	I subsequently had a meeting with the principal, the home school liaison officer and a classroom teacher at Terence MacSwiney. Again the needs and ambitions of the school were identified.
4.	The next meeting took place with music facilitators who were already involved in the SoundOUT music programme. I identified facilitators who had an ethos of inclusivity and those who incorporated creative practices in their work with young people in Cork city. These tutors were Rory McGovern, Rachel Healy and Jessica Cawley.
5.	Once I had initial meetings with all the stakeholders on an individual basis, I brought all partners (SDC,TMS and SoundOUT) together to do a proposal for MGCC to fund Till 4. Upon submission of a proposal, a final meeting took place with MGCC and Cork Music Education Partnership board members to support structural development in the SoundOUT organisation in order to meet the funding conditions of MGCC. These developments included the development of a constitution and a steering committee in order to oversee the Till 4 project.
7.	Information workshops were facilitated with students at SDC and subsequently similar workshops took place at TMS to assess the interest of students in getting involved in Till 4.
8.	Once there were enough students from each school to establish Till 4, equipment was purchased by MGCC and facilitators were registered as tutors to be paid by MGCC. Also a venue and a weekly time was chosen for rehearsals.
9.	SDC offered to transport the students to TMS on a weekly basis for inclusive band rehearsals. The Principal arranged this directly with the Taxi Bus, which brought the children to school on a daily basis.

	An Ecological View of Till 4
10.	Through the FUAIM Music and Community programme at UCC School of Music and Theatre (SMT), volunteer positions in Till 4 were offered to a number of undergraduate SMT students. Before students got involved they applied for the position. They also undertook a mentoring programme with each tutor. This mentoring programme involved a) an afternoon's training on inclusive workshop techniques as well as b) weekly reflective meetings over a period of six weeks in year one and six weeks in year two.
11.	Muireann the classroom teacher from SDC provided disability awareness training for the three band facilitators.
12.	I facilitated an information session with parents of the students involved in the Till 4 programme.
13.	A partnership with local community music project The Hut was established, where many of the Till 4 students began attending this project outside of the Till 4 rehearsal time. This community based music programme was led by Till 4 facilitator Rory McGovern. Involvement in this community project, in addition to Till4, led to collaborations between the school and the local community. This involved the sharing of resources and 'joined up' performances.
14.	Till 4 were invited to perform at a variety of events in the City, including the Cork City Life Long Learning Festival. They also performed in large venues such as the Cork Opera House and Cork City Hall as part of MGCC events. This highlighted, similar to experiences in the Circles band, that most music venues in Cork city are not fully accessible for wheelchair users.
15.	Local and national media, mainly newspapers, featured Till 4 performances and undertook interviews with band members from both schools. This was done to highlight inclusive music practice on a local and national level.
16.	A range of representatives from Music Generation the National Office visited Till 4 as part of the MGCC Trail (2014). This visit involved high profile musicians such as the composer of Riverdance Bill Whelan and RTE Lyric fm's broadcaster Ellen Cranitch. Also connections were established with Music Generation national office at various presentations at music education conferences, during the research period.

Table 9: An ecological view of Till 4

In contrast to the Circles project, most of the organising for the Till 4 inclusive band took place outside of the microsystem - in the exosystem and in the mesosystem. The aim to influence inclusive developments in music education practice mainly emerged from partners in the outer meso and exo systems, in contrast to Cillian's strong ambition to initiate social and educational change from his microsystem. Also the role of the parents in Till 4 was minimal, in comparison to the central role Cillian's parents played in Circles. Both bands were regularly impacted by developments in the exosystem, for example funding priorities of MGCC.

In Figure 29 below, I outline the ecological representation of Mish Mash where Table 10 briefly describes these interactions. Similar to the Till 4 representation, it is presented from the position of a Mish Mash member with disabilities, using a DMI as an example of a developing individual.

An Ecological View of Mish Mash

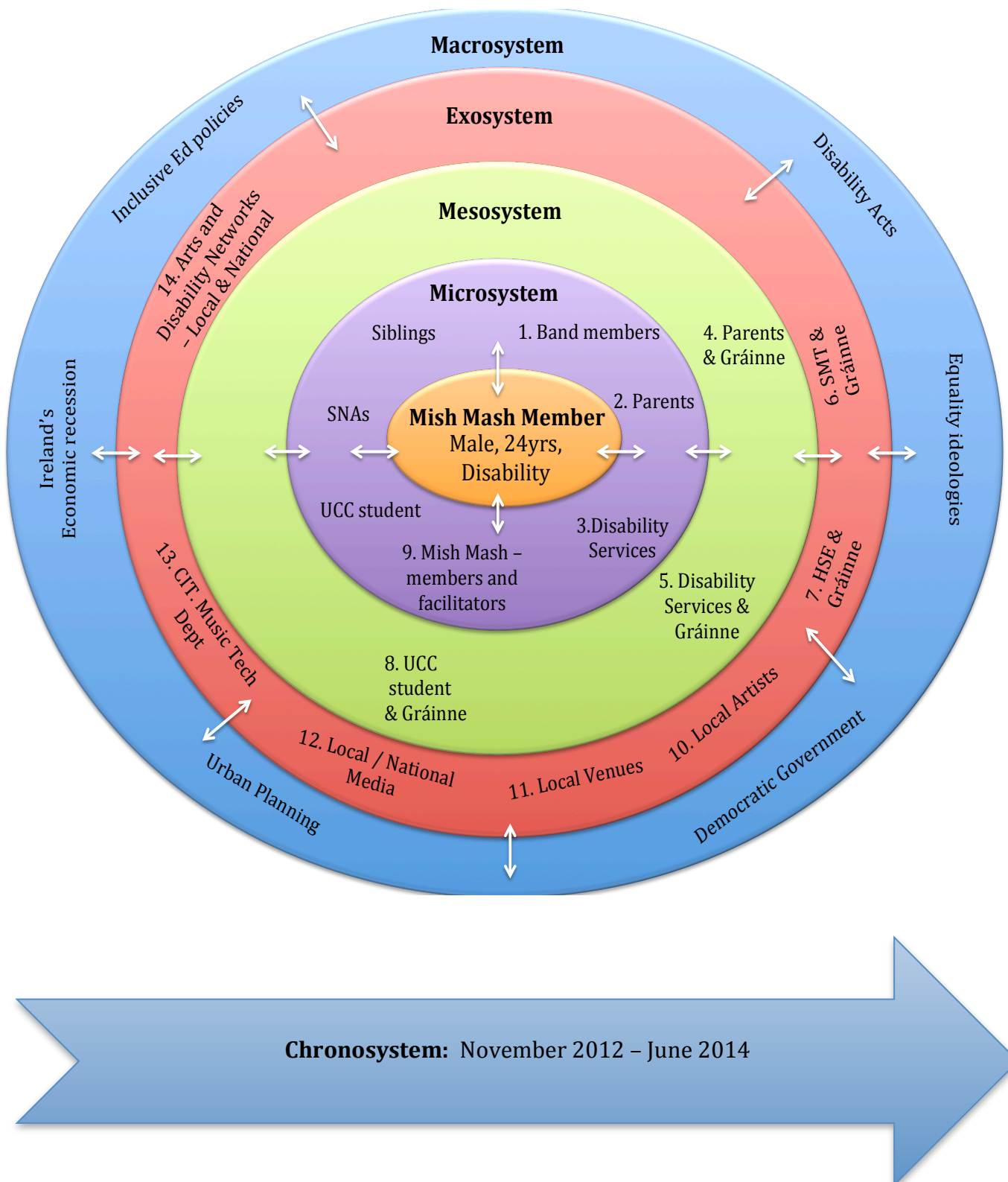


Figure 29: An ecological view of Mish Mash

	An Ecological View of Mish Mash
1.	Mish Mash began, similar to the Circles project, with a request from individuals with disabilities for more inclusive music making and performance opportunities in Cork city. Many of these individuals were past members of Cork Music Works (CMW) and attended various disability services centres across Cork city such as the Brothers of Charity and the COPE Foundation.
2.	An information evening was held for parents and past members of CMW at UCC SMT, where people signed up for the Mish Mash band.
3.	Also a further information session was held at Enable Ireland disability services where members could sign up for the weekly Mish Mash sessions.
4.	Once enough people signed up to get involved in Mish Mash, I contacted their parents to confirm involvement and discuss transport and learning support options.
5.	For members who were travelling from local disability service centres directly to the Mish Mash rehearsals, I arranged travel and personal assistant support for those individuals directly with the disability services.
6.	Discussion with UCC SMT took place to secure a room for weekly workshops and rehearsals as well as a storage space for music equipment. CMW provided sound equipment on long term loan to SoundOUT for the development of Mish Mash inclusive Band, which included Soundbeam technology, the Magic Flute, and sound equipment.
7.	Funding was secured from the HSE, Southern Services, to facilitate a 12-week project.
8.	A call was made to UCC music students to get involved via the FUAIM Music and Community initiative. The UCC student that got involved in Mish Mash undertook a mentoring programme facilitated by SoundOUT which involved skills training in the use of DMIs and weekly reflective practice.
9.	Mish Mash began in November 2012 where I met with the band members by myself initially and again with Graham the second band facilitator in January 2013.
10.	Collaborations took place with local rapper and music producer GMC.
11.	Mish Mash subsequently had the opportunity to perform in various venues and events in Cork city including the Cork City LifeLong learning festival at the CIT Cork School of Music and as part of the FUAIM concert series at the Aula Maxima, UCC.

	An Ecological View of Mish Mash
13.	Collaborations also took place with local educational institutes to develop new technology that aimed to enhance meaningful engagement. James Fogarty from CIT Medical Engineer Department won best undergraduate technology design at the Vicon Award, at Westminster, London. He designed a piece of technology for Jenny Garde, a member of Mish Mash.
14.	Mish Mash performed at the Culture Club, in City Limits, as part of an inclusive nightclub run by people with disabilities. This club was facilitated by the Arts and Disability Network in Cork city. This performance led to further collaborations with the Arts and Disability Network and UK artist Simon McKeown as part of the Cork IGNITE project 2015. ¹⁷⁶

Table 10: An ecological view of Mish Mash

Mish Mash, similar to Circles, emerged from the microsystem, however, it was mainly developed in the mesosystem, involving interactions between band facilitators, parents and representatives from UCC School of Music and Theatre. The lack of development in the exosystem in relation to funding provision for adults learning music in Cork city, impacted the Mish Mash members. Similar to Circles, strong ambitions to influence social and education change in music education practices, emerged from Mish Mash members in the microsystem. Ideologies in the macrosystem and developments in the exo system both informed and influenced partnerships and decisions that were made in all three bands. A commonality in all bands was to initiate further educational, social and cultural change on a micro and macro level, through the presentation and dissemination of experiences of inclusive music practice.

¹⁷⁶ Cork IGNITE (2015) was a collaboration between local disability organisations and UK artist Simon McKeown. This collaboration culminates with a presentation of work as part of Culture Night 2015 in Cork city. For more information visit www.corkignite.com

This brief chapter provided an overview of the partnerships that led to the evolution of the three inclusive music bands in this study. In the following three chapters (8, 9 and 10) I delve into the more intricate details of developing the inclusive bands and the related experiences of members with disabilities using DMIs to access meaningful music making and learning in these bands.

Chapter Eight

Findings: Partnerships and Inclusive Practice

Over the following three chapters (8, 9 and 10) I present the findings relating to the development of the three inclusive bands in this study: Circles, Till 4 and Mish Mash. In this chapter, I discuss the conditions that facilitated the establishment of these three bands in Cork city, including the creation of partnerships, which helped acquire resources and support for the inclusive structures of each band. I also explore the inclusive music practice that evolved in each band in order to facilitate meaningful engagement of all members. In Chapter 9, I investigate the experiences of members with disabilities who use Digital Musical Instruments (DMIs) for creative music making and learning. I also present the personal outcomes for band members participating in these inclusive music bands, with a primary focus on those who use DMIs. All of these experiences are presented from the perspective of the members themselves and are supported by contributions from their families, band facilitators, classroom teachers and other stakeholders. In Chapter 10 I explore issues of social inclusion, advocacy, progression and sustainability that emerged from the data collection. I discuss the developments of each of the bands and the related experiences within the context of the theoretical framework presented in Chapters 2, 3 and 4 of this thesis. This multi-disciplinary framework includes foundational principles and practices from inclusive music education research, as well as those espoused by scholars in the fields of DMIs and music education. This framework also incorporates theories, including the Rhizome Theory, the

Capabilities Approach and Bronfenbrenner's Model of Social Ecology. I found these theories to be particularly useful when exploring findings that relate to the inclusive structure and pedagogical process in each band. However, when examining findings relating to personal and social outcomes, I focus less on their relationship to theoretical concepts and more on the emerging meaningfulness of the work for participants. Finally, I conclude the discussions in Chapter 10, with reflections on this study and its implications for informing new thinking on the use of DMIs for inclusive music making and learning, both in Ireland and internationally. I signal the potential of DMIs to enhance meaningful music making and learning within an inclusive band environment, and I explore the capacity for this approach to contribute to the equality and social justice agendas that currently exist within the field of music education. I finish this thesis with recommendations for future research in this field.

Within the context of the ecological map of the three inclusive bands, discussed in the previous chapter, I frame and discuss findings from this study using the following six, inter-related themes. Each theme is more or less relevant to individual bands.

1. Partnerships
2. Inclusive Practice
3. Creative use of Digital Musical Instruments
4. Personal Development
5. Social Inclusion and Advocacy
6. Progression and Sustainability

1. Partnerships

Employing key concepts from the Rhizome Theory and the Capabilities Approach, I examine the development of partnerships and how this process has impacted the bands in this study. I explore how multiple partnerships enabled me to harness the necessary resources for each band. I also discuss how these partnerships facilitated the growth of band member's progression routes and I outline the perceived challenges of adopting a partnership approach to inclusive music practice in Cork city.

Partnership, in this study, refers to individuals, groups or organisations coming together to achieve the mutually beneficial and common goal of inclusive music making and learning. The development of context-specific partnerships was a key element in the structure of each inclusive music band. In order to garner resources for each one, I developed a range of local, national and international partnerships. A central concern was to facilitate a partnership structure that accommodated the values, needs and ambitions of all partners, along with providing a space for progression, flexibility, exploration and informal developments.

To understand the flexible and context-responsive process inherent in each band, I draw theoretical insight from both the Rhizome Theory and the Capabilities Approach. The connectivity of the Rhizome Theory and its adaptable nature, supports a partnership approach to developing inclusive music bands, as the Rhizome adapts to its environment by continuously creating

connections, while having a foundation of core principles. Similarly, each of the three inclusive bands developed multiple partnerships that evolved and adapted to the context-specific needs and motivations of its members and the communities in which they existed, while remaining committed to the core principles of inclusion, empowerment of individuals and celebration of diversity. This focus on developing structures and practices that respond to individual's values and musical goals in order to enhance meaningful engagement, resonates with the ethos of the Capabilities Approach, where empowerment and celebration of diversity are central tenets. Supported by multiple partnerships, the enhancement of each band member's 'capabilities', by facilitating individuals to follow their unique progression route, or 'line of flight', was dominant in each band.

Before examining the use of partnerships to develop and share resources, as well as supporting the development of 'lines of flight', I present a review of the partnership structures for each band. Circles, Till 4 and Mish Mash bands were developed in response to specific requests for inclusive music making and learning opportunities for individuals with disabilities in Cork city. The creation of partnerships in the Circles band evolved from Cillian's ambition to make and learn music in his local community. The initial partnership for Circles was fostered between Cillian and I, where he reached out to me in order to seek more inclusive and meaningful experiences using music as a medium. As I pointed out in Chapter 6, his request to achieve his 'functioning'¹⁷⁷ of music making in order

¹⁷⁷ 'Functioning' is a valuable doing and being as presented in the Capabilities Approach, discussed in chapter four of this thesis (Sen, 1999).

to enhance his ‘capabilities’ came in the form of a typed letter. He wanted to make music, write his own songs, play in a band, get a qualification in music and ultimately work in the industry. To realise each of these desires, we worked together to develop local, national and international partnerships, which included, for example, the collaborations with the Togher Music Project (TMP), applying for funding from Music Generation Cork City (MGCC), and receiving technical support for Eye Gaze accessible music software from developer Tim Anderson and SKUG¹⁷⁸ from Norway.

Mish Mash also evolved from a specific request for inclusive music making opportunities from members of local disability services and past members of Cork Music Works (CMW). The partners that led to the establishment of Mish Mash, involved SoundOUT, CMW, UCC School of Music and Theatre (SMT), Health Service Executive (HSE) Southern services, as well as band members and their parents. When co-ordinating the development of Mish Mash and Circles, I had direct interactions with parents on a regular basis, whereas, in the Till 4 band, I interacted more with the partner schools (SDC and TMS) and MGCC, as opposed to with parents. The planning process for Till 4¹⁷⁹ was more formal, which was in contrast to the informal and naturally evolving planning process in Circles and Mish Mash.

¹⁷⁸ SKUG is a music school in Tromsø (Norway) that provides inclusive music making and learning opportunities for all ages and abilities. They specialize in the use of Digital Musical Instruments to make music universally accessible.

¹⁷⁹ The main partners in the Till 4 project involved representatives from SDC and TMS secondary school, SoundOUT band facilitators (Rory McGovern, Grainne McHale, Rachel Healy and Jessica Cawley) and the co-ordinator of MGCC, Margaret O’Sullivan.

In the following section I examine how this partnership structure enabled me to gather the necessary resources to support each band.

Partnerships and Resources

Resonating with the ‘Connections and Heterogeneity’ principle in the Rhizome Theory, the sharing of resources between multiple and diverse partners was essential to the survival of each band. Context-specific partnerships emerged in each setting, resulting in a variety of resources being made available. For example, in Circles, CMW provided Soundbeam technology for Cillian to use, TMP provided a space and instruments to facilitate band rehearsals, SoundOUT provided music facilitation and DMI expertise, Cillian’s parents provided transport, learning support and personal care, and Enable Ireland disability services facilitated Cillian’s involvement in the band, by allocating leave-of-absence from his commitments. In the later stages of the project, MGCC provided funding for a music facilitator to work on an individual basis with Cillian in conjunction to leading band rehearsals. These partnerships also led to the provision of a range of networking opportunities and professional development for the inclusive band facilitators, including training on the use of DMIs, facilitated by the Soundbeam Project (UK), which was funded by MGCC.

The EPSEN report (Government of Ireland, 2004) recognises that ongoing inclusive practice is sustained where resources are available. In my experience of establishing, developing and sustaining the three inclusive bands in Cork city, I found that through adopting a partnership approach, immense support and resources was received from local communities and partners. This support made

the development of the inclusive bands in this study possible. In addition to the harnessing of resources and expertise from groups and organisations, it was necessary to seek on-going funding to pay for band facilitators and administration costs. As a result I continuously developed and adapted Circles, Till 4 and Mish Mash, in response to the evolving music education funding structures and priorities in Cork city. For example, the pilot study was created on a voluntary basis and Circles was initially funded by a Cork City Council 'Arts in Context Award'. This award supported short-term work that was context specific and inclusive. It also prioritised creative practice that developed local partnerships, which aligned very well with the ambitions of Circles. This award did not prioritise educational outcomes. When the 'Arts in Context Award' funding finished in December 2012, a new funding partnership with MGCC was established. This partnership resulted in MGCC committing funding to both Circles and Till 4 for three years, between 2012 and 2015, with a view to developing a sustainable model for inclusive music practice. The educational priorities of MGCC, enabled Circles and Till 4 to focus on long term music development goals, as opposed to the short term requirements of previous funders. Since 2015¹⁸⁰ there is a termly (12 weeks) review with MGCC on the availability of funding and programme support. This ongoing provision of funding provides Till 4 and Circles with a stronger sense of sustainability. Prior to the involvement of MGCC, the Circles band had engaged in continuous advocacy through performance in order to attract funding to sustain this inclusive

¹⁸⁰ The Department of Education and Skills took over the provision of matched funding for MGCC in January 2015.

music practice. This advocacy process is still essential for Mish Mash to sustain their inclusive music practice, as the band does not receive regular funding.



Figure 30: Circles performing in City Hall

The consolidating of resources and funding for each inclusive music band through partnerships with Cork’s music community is effective, however it can be a fragile and potentially unstable source of resources. This is an issue that is discussed further in the sustainability section in Chapter 10.

Partnerships and Progression Routes

Multiple partnerships were developed with each band in order to facilitate members to follow their musical ambitions through diverse progression routes or ‘lines of flight’, both within and beyond band. The Rhizome Theory’s ‘Principle of Multiplicity’ provides a useful perspective to explore this phenomenon. These ‘lines of flight’ were developed and evolved in response to member’s values and musical ambitions. This person-centered process aligns with the Capabilities Approach, which emphasises a focus on individual’s freedom of choice to undertake what they find valuable doing and being in life.

All three inclusive music bands in this study aimed to empower members to develop their ‘functioning’ of music making, in order to enhance their ‘capabilities’. This resulted in multiple ‘lines of flight’ being established and adapted, which led to the continuous evolution of a variety of partnerships. These partnerships were essential in assisting members to have access to ‘multiple entry and exit’ points into and out of the inclusive bands in order to continuously develop their ‘line of flight’. The Rhizome Theory’s principles of ‘Cartography and Decalcomania’ can be used to contextualise this fluid practice.¹⁸¹ For example, Graham followed his ‘line of flight’ within the Circles band when he developed skills in the area of using DMIs for creative music making and gaining experiential learning for group facilitation. He also reached beyond the band, through the partnership with MGCC, to gain more experience in diverse settings¹⁸², which led to him undertaking further study in the area at CIT Cork School of Music. A partnership that supported ‘lines of flight’ from the inclusive bands was also developed with City North College in Cork city¹⁸³. This connection provided opportunities for Cillian and members of the Mish Mash band to follow their ambition of engaging in further music education through being enrolled on FETAC¹⁸⁴ music theory and performance courses.

Similar to a Rhizome, the partnerships in each of the inclusive bands were

¹⁸¹ Deleuze-Guattarian decalcomania is a method of ‘forming through continuous negotiation with its context, constantly adapting by experimentation, thus performing a non-symmetrical active resistance against rigid organisation and restriction.’ (Deleuze and Guatarri, 1988).

¹⁸² Graham subsequently became a band facilitator for other bands in Cork city through the MGCC initiative.

¹⁸³ City North College is a further education college in Knocknaheeny on the north side of Cork city.

¹⁸⁴ FETAC stands for Further Education and Training Awards Council. Cillian, Karl, Kevin and Jenny have recently completed FETAC Level 5 Music Appreciation at City North College.

always in a state of flux. They often had to adapt due to multiple, often external, factors, such as the availability of funding. As a result, ruptures occasionally occurred in a band member's 'lines of flight'. For instance, when the pilot inclusive project with the Knocknaheeney Youth Music Initiative (KYMI) closed down due to funding cuts, it became necessary for Cillian to reimagine his 'line of flight'. To continue his ambition for inclusive music making in a band environment, he sought new connections, leading to the rebirth of a new inclusive band, in collaboration with the Togher Music Project (TMP). This process of seeking new connections, where previous ones fail, reflects the adaptive mechanisms as propagated by the Rhizome Theory.

When discussing the creation of individualised 'lines of flight's for each band member, I found it was necessary to be mindful of student's previous music making and learning experiences. Muireann, a classroom teacher from the School of the Divine Child (SDC), emphasized that sensitivity to the previous partnerships and experiences of students with disabilities was crucial in the planning of Till 4. She recalled that she had 'witnessed in the last ten years, students who are being forced to look at special education at a far later stage because mainstream settings has failed them' (Muireann O'Shea). She suggested that previous negative experiences of inclusive education could impact students with disabilities involvement in an inclusive music project and their ability to envisage a musical 'line of flight'. John O'Shea, a member of Till 4, had recently transferred from a mainstream secondary school to SDC. He described his time at his old school as becoming 'too hard' and he decided to transfer to

SDC during his work experience in transition year¹⁸⁵. Here John describes his experience in this previous secondary and how he decided to transfer to SDC:

Well ‘twas like, all my friends were very good to me but there was one morning that I didn’t want to go to school at all and I was crying and all. Once I came in here [SDC] I was fine. I came here on work experience and I didn’t want to leave at all. So I went, “I think I’ll stay here”. (John O’Shea)

John is hugely passionate about music and expressed his desire to become a DJ after school. However, he doesn’t associate this ambition with music education. When asked about his music education experience in his previous mainstream school he said that,

Music wasn’t really offered to me, like, in my old school. There were loads of people going over doing dancing and music and stuff. There was dancing and stuff but it was never offered to me. Maybe because it was upstairs and I couldn’t go up in my chair? It’s just not for me. (John O’Shea)

Patricia, the principal at SDC, suggested that inclusion in music, particularly in mainstream settings ‘depends on individual teachers’ (Patricia Harrington). In her role, as both the principal of SDC and a board member of the National Association of Boards of Management in Special Education (NABMSE), she drew attention to the lack of support, resources and partnerships available to teachers to support students with disabilities in mainstream settings. John’s previous negative experience of music education contributed to his initial anxiety about being involved in the Till 4 music project because it took place at a mainstream school site. However, once he started weekly rehearsals he enjoyed

¹⁸⁵ Transition Year in Ireland is the fourth year in secondary school where students undertake more informal learning activities. In most schools, students engage in work experiences as part of this transition programme.

the experience thoroughly.



Figure 31: John from Till 4 playing the Magic Flute

Adapting the recruitment process for each band to take into consideration all previous experiences of music education was essential. For example when developing the Till 4 band, time was allocated during the planning stages to discuss the structure and process with Till 4 students as well as making sure each member was aware of the possibilities for musical ‘lines of flight’. Many conversations took place with students and the school staff, concerning measures that the band facilitators and other partners could take, in order to facilitate a safe and positive experience for all involved. One such measure was to ensure one-to-one Special Needs Assistant (SNA) support for John.

Patricia believed that past positive musical experiences, with a variety of partners and music teachers, myself included, enabled some students to ‘fall into the Till 4 project very easily’ (Patricia Harrington). These prior experiences had a significant impact on the ability of many students to engage with group music making activities, and ultimately led to more meaningful engagement in the band. This was also evident for band members in Mish Mash. The majority of

members joined Mish Mash after engaging in a positive musical experience, either through CMW activities or within their DS. The development of band member's 'lines of flight' was directly influenced by previous experiences and partnerships. Once the research period in this study finished and band members progressed to new education or training settings, I discovered that their involvement in these inclusive bands further expanded possibilities and ambitions for their musical 'lines of flight'. For example John, Danielle and Cian's experience in Till 4, was positive and has further motivated them to campaign for and get involved in an inclusive music project as part of their daily activities at Enable Ireland disability services.

The theoretical perspectives afforded by using the Rhizome Theory and the Capabilities Approach, has provided insight into the flexible and adaptable structures that were central in each band. The challenges of sustaining these partnerships are discussed in the upcoming section.

Challenges of Partnerships

As a result of multiple partners associated with each band, numerous priorities often existed, and I found it was challenging to accommodate the needs and expectations of all partners equally. For example in the Till 4 band, I discovered that certain partners were over-burdened in terms of resource provision. For instance MGCC's funding priorities and the available resources at Terence

MacSwiney (TMS)¹⁸⁶ influenced the decision to host the Till 4 weekly band rehearsals at the site of TMS School. This resulted in students from SDC travelling to TMS every Wednesday via taxi, which eventually became a significant strain on SDC resources.¹⁸⁷ Patricia stressed that ‘in this school the big challenge is financial’ (Patricia Harrington). The school engaged in continuous fundraising to pay for an accessible taxi bus to bring the students from SDC to TMS on a weekly basis. The responsibility of ensuring continuity for the students to travel to Till 4 band rehearsals each week fell solely to the school and the enterprising principal. Patricia explained that ‘parents are very pleased, all very pleased with the project. Not to the point where they step in and bring their children to it though.’ (Patricia Harrington). She opined that this is the result of a high level of expectation that, she suggested, often exists in parents of children with disabilities.

Sustaining the partnerships necessary for Till 4 became a serious concern for all involved, particularly when resources including support staff were already stretched in SDC. According to Patricia, a designated bus and driver for the school would be an effective solution to this challenge: ‘if we owned our own bus, we’d have to have our own driver and it would be cracked!’ (Patricia Harrington). She advocated for more collaboration, especially regarding bus usage, between adult disability services and Special Educational Needs (SEN)

¹⁸⁶ Resources such as space, instruments and expertise in band music making, being based at TMS as well as the school’s position within the designated RAPID area (a funding condition of MGCC)

¹⁸⁷ Following school protocol, one classroom teacher and one special needs assistant travelled with the students every week to TMS. During a climate where resources in schools were limited, as a result of ‘cut backs’ it was felt it was too much of a burden to have two members leave the school on a weekly basis for an hour. The cost of the weekly taxi was also a contributing factor.

schools. It emerged that SDC was unable to continue support via taxi and staff for Till 4 beyond June 2014, which led to the disintegration of the project. However the band re-grouped at a new time with new resources the following term, September 2014. The Till 4 band now meet after school in TMS, where parents bring their children directly to weekly rehearsals after school time, reducing the level of learning support and financial input from SDC.¹⁸⁸ Group music workshops continue to be offered at SDC in order to facilitate the engagement of students who were unable to attend evening band rehearsals.¹⁸⁹ This reflexive process resonates with the Rhizome Theory principle of 'Asignifying Rupture', which refers to when a rhizome may be broken it re-emerges on a new 'line of flight' while still encompassing core philosophies. For example the new Till 4 band re-emerged in TMS, while still being underpinned by the principles of inclusion, celebration of diversity and empowerment of individuals to achieve what they find valuable.

The three bands relied on the essential partnership with families of members with disabilities. I found this to be particularly relevant in the case of Circles, where Cillian's parents provided the main supports for his involvement, due to the lack of available resources from his disability service. They provided his transport, learning support and personal care needs for all Circles rehearsals and performances. Angela, Cillian's mother, described his aim for inclusion in

¹⁸⁸ Parental support for Till 4 was offered after two years of the project involving students from SDC. Patricia's initial request to involve parents happened at the beginning of the project in 2012.

¹⁸⁹ Some students did not have familial support or access to transport to attend the after school band rehearsals. The weekly classes at the school aimed to still include these students interested in some form of music making and learning.

music, beyond once-off projects, as a challenge, due to his high support needs. She pointed out that ‘Cillian is mentally on par with his age - always has been. His main disability has been that he couldn’t get out into the real world’ (Angela McSweeney). She suggested that the lack of partnerships between mainstream educational settings and disability services has been a barrier to Cillian’s inclusion. When discussing this issue of inclusion in mainstream settings, Angela emphasised that,

You have to be realistic when it comes to inclusion, because there are medical and personal care issues. You have to take all of that into consideration, no matter where you want to go. It’s all very well to say I want to get away from the services and get out into the real world. But if the support is not there? It is a big issue for him. He needs the support. (Angela McSweeney)

Circles was developed to take both Cillian’s ambitions and needs into consideration. This led to a partnership involving his parents, staff from his disability service, his Personal Assistant (PA) the TMP and SoundOUT.



Figure 32: Cillian from Till 4 and his Parents, Angela and Tom.

The development of inclusive music bands, particularly ones that regularly bring individuals from different educational settings together for rehearsals and performances, can be resource heavy in nature. Securing funding to support these bands was challenging. Previous to receiving funding from MGCC, inclusive music bands in Cork city were one off short-term projects and often were undertaken on a voluntary basis. Margaret O’Sullivan, the coordinator of MGCC, referred to the practical challenge when deciding to support the Till 4 project during the initial MGCC application process: ‘I remember one person expressing concern that working with children with disabilities was hugely expensive’. She recalled a Music Education Partnership (MEP) member challenging the SoundOUT application ‘how can you justify that programme when there’re so many other children that you could get so much more value out of that money’ (Margaret O’Sullivan). Margaret explained her decision to fund SoundOUT, in particular the Till 4 and Circles band, as a value judgement:

We were making a philosophical choice, a value judgement about how to apportion those resources so, I mean, it is expensive but, to be honest, the amount of value SoundOUT is delivering isn’t out of proportion to other programmes. I don’t think you could make a case against it. (Margaret O’Sullivan)

The Circles and Till 4 band were very fortunate to develop a partnership with MGCC, which invested in DMIs and band equipment for use by both bands, in addition to providing ongoing funds to pay facilitators for weekly rehearsals.

As Mish Mash is the only band that did not receive funding from MGCC, it was the most challenging project to sustain. SoundOUT received funds from the Health Service Executive (HSE) to develop a three-month inclusive arts project

in 2012. These funds enabled me to buy some music technology equipment, provided finance for band facilitation for 12 weeks and funded a limited number of workshops with GMC, a local rapper and music producer.

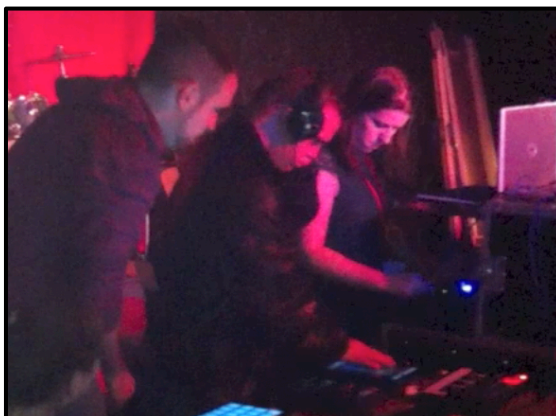


Figure 33: Riobard and Grainne from Mish Mash performing with GMC at Culture Club

After the funding finished, conversations emerged around the sustainability of this project with key partners including Mish Mash members and their parents, the Mish Mash facilitators, a representative from UCC School of Music and Theatre (SMT) and a representative from CMW. Resources were garnered from all of these partners to continue with this project. UCC continued to allocate storage and an accessible workshop space for free, parents contributed a small fee to pay for facilitator costs, CMW continued to loan DMIs (including aSoundbeam and a Magic Flute) and I worked voluntary and undertook fundraising activities to financially support the project. Mish Mash continues to date, however its sustainability is a challenge as it relies on the combined good will of all of these partners.

According to Burton and Greher (2007), the key to successful partnerships is regular dialogue. A prominent challenge in sustaining the partnerships in each of the inclusive bands was the lack of support for co-ordination to facilitate such

dialogue. I found that the provision of funding to facilitate administration, co-ordination and regular communication between partners was an essential element to take into consideration when developing inclusive music practice in Cork city. A partnership approach, between band members, parents, schools, funders and community organisations, needs to be coordinated by an individual who is involved on a strategic level, as well as being involved within the practice. Through clear communication and negotiation of needs and ambitions from all partners, I believe it is possible to develop and sustain, inclusive bands that doesn't over burden any particular partner, leading to inclusive practice that is mutually beneficial for all partners. For instance if disability services, parents, schools and band co-ordinators came together to collaboratively plan strategies for inclusive practice, this would further the potential for inclusive music bands to meet the needs and inclusive priorities pertaining to each partner. Overall partnerships are a core, yet challenging element of the inclusive bands in this study. Adopting a partnership approach to establishing these bands was effective, however I felt it was difficult to sustain the required level of input from multiple partners. Ultimately, this partnership structure proved to be an unreliable and fragile foundation for this inclusive music practice.

2. Inclusive Music Practice

Under this second theme, I examine the inclusive music practice in this study. A core objective for me in each band was to ensure meaningful engagement of all members, by supporting him/her to achieve their musical ambitions. In order to realise this aim, I invoked elements of the Capabilities Approach and the Rhizome Theory, such as the focus on diversity, provision for the freedom of

choice and the development of unique ‘lines of flight’ that evolved from individual goals and values. Furthermore, I drew inspiration from inclusive research and practice in the field of music education, where I especially aspired to embed ‘Universal Design for Learning’ (UDL) principle in all band activities. UDL is a prominent feature of inclusive music education, which promotes a flexible teaching approach in order to facilitate meaningful engagement in music making and learning for varied abilities in one classroom (Darrow and Adamek, 2012; Jellison, 2012). I was also influenced by developments in the international use of DMIs for creative music practice to strengthen this universal access to music making and learning.

Through my experience of both facilitating and co-ordinating each of the three inclusive music bands, I have identified common features that supported the inclusive music practice to emerge in this study. I begin this section by discussing the importance of creating a safe learning environment, while outlining the research respondent’s perceptions of what constitutes the core elements of such an environment. I follow this with an account of the informal and collaborative learning approaches that were adopted in each band to foster creative and meaningful music making. I subsequently describe the experiences of engaging with diverse instruments and styles of music, while presenting the research participants’ perceptions on the significance of celebrating diversity in supporting inclusive music practice. The role of performance in each band is also detailed. I conclude this section by describing the vital function of embedding diverse communication approaches in each band. I also describe the importance of having an awareness of various learning styles and providing freedom of

choice surrounding the level of participation for members in each band.

Safe Learning Environment

I aimed to create a safe environment in each band, where all members felt comfortable to explore their creativity. When discussing the inclusive music practice in this study with research respondents, I found that establishing a safe learning environment was a prominent and important feature in this study. Rory, the Till 4 facilitator, stated that the development of a safe environment was central to his practice in the Till 4 band. He suggested that it was very important to create,

A safe space for music making. I'd say that's kind of essentially what we're trying to do, you know, where people you know just kind of express themselves freely and they can learn without fear. A safe learning environment is a big thing for me. (Rory McGovern)



Figure 34: Josh from Till 4 singing his original song for the group

From the initial stages of this study, I engaged in reflective practice and undertook a reflexive approach when facilitating music making, as I felt these methods could support a safe environment for learning in each band. Muireann, the classroom teacher from SDC, felt that the band facilitator's ability to 'listen' as well as 'being open to suggestions' when working with the members were key

factors in the success of the inclusive bands (Muireann O'Shea). To bolster this flexible approach to inclusive music making and learning, Rory, from Till 4, suggested it also was necessary for band facilitators to always have a positive attitude when working with groups. He felt this was vital in the provision of a safe learning environment: 'It's important to stay positive all the time. This is a big thing for me. Before you go in you have to try and leave negativity at the door you know' (Rory McGovern).

A key element of creating a safe learning environment in this study, was facilitators being open and enthusiastic in supporting band members to follow their musical ambitions and embrace their creative potential. This open and flexible attitude of band facilitators was underpinned by an ethos that celebrates individuality and diversity. For Rory, the Till 4 facilitator, this meant not putting 'labels on people. Each individual person is different and brings something different' (Rory McGovern). I propose that a focus on an individual needs, values and ambitions was essential in making people feel comfortable enough to push their creative boundaries. According to Graham, the Circles band facilitator, a large aspect of a band facilitator's job is 'to enable people to put themselves on the line. Take creative risks' (Graham McCarthy). This openness and creative risk-taking resonates strongly with Higgins's concept of 'safety without safety', a key feature of community music practice. 'safety without safety' advocates the facilitation of a safe environment, where band members or workshop participants push their musical and creative boundaries (Higgins, 2012). This process of creating a safe space for band members to move beyond their comfort zone was exemplified in Circles. For instance one Circles band member was particularly

nervous when contributing to the creative process during the early stages of the project. To encourage accessible participation by all members, an open, positive, informal and flexible process was always undertaken to create new work within the group, where everyone's contribution was valid. This provided a safe space where all participants got involved and over time that particular member became more comfortable, engaged and often took a leading and decision making role in the creative process.

In order to reinforce a safe environment for each band, I felt it was important to develop a clear structure, which included a timescale, team facilitation and the incorporation of learning support for some members. Aideen, the UCC School of Music and Theatre student emphasised this point when discussing the development of a safe environment for the Mish Mash band:

The structure was so important for people. Even with Christine having a taxi waiting for her after she finished. It's very organised. They come in and leave. There is no waiting around for transport. It runs so smoothly. Everyone felt very safe. I think that was so important. (Aideen Carroll)

I found that this open, positive and adaptable approach to facilitating music making, supported by a clear structure, empowered band members to feel safe to push their creative boundaries in each band. In the next section I describe in more detail the informal approach to creative music making and learning that was undertaken in each band and the subsequent experiences of participants.

Informal Approach to Creative Music Making and Learning

Through adopting an informal approach to creative music making and learning in

each band, I aimed to facilitate experiences that were culturally relevant and meaningful for all members. I aspired to support each member to achieve what he or she consider valuable within the context of each band, and enable them to develop their unique 'line of flight'. The Rhizome Theory's flexible and adaptable structure, used in the previous section to describe the development of partnerships, can also be applied to explore this approach to music making and learning. The Capabilities Approach is also useful when examining this evolving practice, as 'lines of flight' emerged from member's values and goals.

I placed significant emphasis on informal learning approaches in each band, as I felt it would be more conducive to the emergence of more meaningful creative practice. Muireann, the classroom teacher from SDC, described Till 4 as 'fluid. Not overly structured or regimented. I think that really worked with our students' (Muireann O'Shea). Central to this informal approach was a focus on student-led activities and peer-to-peer learning, where support from facilitators was available, when appropriate to the learning activity. Jessica, the Till 4 band facilitator, described this process by stating that: 'we are the facilitators of the students doing their own practice. We help them when necessary. When they need a bit of guidance' (Jessica Cawley). This informality provided a space for band members to express their own creativity, in both the creation of original compositions, but also in the learning process. Jessica describes this process as:

When you are in a facilitation role you're automatically making the practice more creative because the students are the ones who have to think of it. They're the ones who have to pick the songs, pick how many times are we going to do it. Are we going to do it again? Are we going to start here? And are we going to do a solo bit? For me that is what creativity is. (Jessica Cawley)

According to Cian, a Till 4 band member from SDC, ‘the best bits are writing our own music’ (Cian O’Sullivan). I found that facilitating creative music making and learning using informal approaches in each band, not only provided a more rewarding experience for the band members but also for the facilitators: ‘Creative music making with students is very rewarding in itself. I get a lot of enjoyment out of teaching creatively’ (Jessica Cawley).



Figure 35: Danielle from Till 4 taking a break from composing

Facilitating creative music making through informal learning processes was central to the inclusive practice in the Circles band. Graham, the band facilitator in Circles, describes the process undertaken by band members when creating new music:

Sometimes we just begin with a seed of an idea. Someone brings in a riff or chord progression or lyrics and we jam on that until something emerges that has a vibe. We keep working away on it. Sometimes people just ‘ad lib’ parts. Then often people would go away with these seedling ideas and flesh them out. It just works. (Graham McCarthy)

I found that adopting an informal approach to creating original music, in contrast to having a sole focus on recreating popular songs from the charts, enabled each band member to make musical contributions at their own ability level, thus

providing multiple entry points to the creative process. Graham from Circles, corroborates this when he describes his rationale for promoting the creation of original music with band members:

In cover songs you have a benchmark to measure your own ability against which can be discouraging sometimes if you can't play it. Whereas with original music there is no right and wrong and people can contribute to the maximum of their potential in a meaningful way for themselves. (Graham McCarthy)

The informal approach to making and learning music in each band provided a space where everyone, including facilitators, got to know each other. It is a factor that both Graham from Circles and Rory from Till 4 feels is an 'essential process to go through' (Rory McGovern) and is 'massively important as it develops trust and that's the big thing!' (Graham McCarthy).

This informal music making in Mish Mash facilitated both conscious and unconscious creative outputs. I aimed to capture and support the innate creativity of members when they were consciously composing new music, as well as during times when they are subconsciously being creative with music. Aileen, a Mish Mash member, described the unconscious creative output from Aoife, another Mish Mash member, as 'amazing. The different sounds that she was just coming up with naturally in the workshops. They were brilliant. Like the noises she was making in the microphone was incredible!' (Aileen Carroll).

A central concern for the Mish Mash band members was having fun with music in an informal environment. Aoife from Mish Mash describes the weekly rehearsals as:

It's all about having fun and having a good time together really. Making Friends. It's a life. I enjoy having the time here with my friends. It's epic. By the way, Epic means it's class!! (Aoife O'Sullivan)

Aideen, also from Mish Mash, described both the rehearsals and performances as ‘very informal. We have a lot of good fun together. It’s not strict. We are able to have a laugh’ (Aideen Carroll). Combined with this informal and fun approach to music making and learning, facilitating collaboration between band members as well as between facilitators was crucial in each band. In the following section I describe the collaborative processes that took place in each band.

Collaborative Approach to Creative Music Making and Learning

As described earlier under the partnerships section, macro collaborations, such as the development of partnerships with funding bodies, community organisations, schools and families, underpinned activities within the three inclusive bands. Collaborative processes also took place on a micro level, between members themselves, band facilitators and classroom teachers. I learned that both the macro and micro collaborations in each band were fundamental in supporting the inclusive music practice in this study. These combined collaborative partnerships provided an armature for progression routes or ‘lines of flight’ for members. The Rhizome Theory’s principles of ‘Cartography and Decalcomania’, can be used to understand this evolving process of collaboratively creating ‘lines of flight’ within and from the three bands, enabling multiple entry and exits points to this creative practice. Furthermore the Capabilities Approach provides a useful perspective to understand the collaborative development of multiple ‘lines of flight’ as it enables a focus on empowering individuals to have the freedom to choice to engage in what he/she find valuable doing and being in this band context.

On a micro level the students collaborated with each other, supported by a

team of facilitators, to expand their musical ‘capabilities’. This approach was inspired by the recognition that collaboration and peer-to-peer learning, as advocated by Vygotsky, has a positive effect on learning, particularly for vulnerable students (Jellison, 2012, p.74). I found that collaboration between band members, facilitators, classroom teachers and families, within each band was widely beneficial and enhanced meaningful engagement for members. However I discovered some challenges in this process, which I discuss throughout this section.

Supported by facilitators, collaboration between band members yielded positive learning experiences. Cian, from SDC described the positive impact of learning drums with Darren from TMS in the Till 4 band: ‘Rory taught me and Darren to play the drums. It is a bit hard but Darren helps me too. Keeping the beat is very hard, but with Darren I’m flying it’ (Cian O’Sullivan).



Figure 36: Darren and Cian from Till 4 learning drums.

Beyond the positive learning outcomes from collaborative activities in the Till 4 band, I found this process, enabled members from each school to get to know each other more easily, particularly when writing songs. Danielle from SDC felt that she found common ground with Deana from TMS when writing the song

‘Memories’:

You get to write songs together and all that. We wrote a song called ‘Memories’ with one of the girls Deana. It’s the best song we could have written in our whole life. It’s about friends. In one part Deana’s fighting with her friends and in another part she’s making new friends. That happens me too sometimes. (Danielle Kelly).

A sense of collaborative purpose radiated from the Mish Mash band when discussing their approach to creative music making and learning. When asked to describe the creative process in Mish Mash, Riobard stated that ‘the most important thing is that we work together. We work together in a group doing new things. Working together. We help each other.’ (Riobard Lankford). This collaborative purpose was also evident when discussing Mish Mash’s creative process with band member Karl. He specifically referred to the collaborative and multi-layered approach that they engaged with when creating new music together. He identified various the musical roles of band members. He described his own musical role as a type of anchor for the musical pieces, as he played chords and various melodies on the keyboard throughout all of the pieces: ‘I hold down the piece. I play all of the time so the others can come in and out of the tune’ (Karl Murphy). According to Karl this collaborative approach provided a space for musical engagement of all band members in Mish Mash.

I found that collaborative practice, when creating original music, was also a common and positive activity in the Circles band. When discussing the band’s approach to creative music making, Graham, the Circles band facilitator, described the process as being,

Massively dependent on collaboration. We work together. We go around the room and talk it out. We get lyrics that work and then put them to the music. I don't say you do that or you do that. As a band facilitator I feel the need to make suggestions sometimes but ultimately we work together. (Graham McCarthy).

I discovered that this collaborative process was unfamiliar for many of the band members previous to Circles. Dave, Circles band member from the TMP, reflected that,

I'd never written songs with other people, I'd never collaborated with anyone. It took getting used to but I think a collaborative approach is brilliant. It was inclusive without just saying it was inclusive. Rather than saying we wrote a song with Cillian, we actually wrote a song with Cillian. Not that Cillian was there and we wrote a song (Dave Barrett).

I ascertained that some challenges emerged in Circles relating to the time consuming nature of this collaborative approach to creative music making and learning, particularly when there were upcoming performances. While emphasising the positive aspects of collaboration, Graham from Circles, highlighted that,

It sometimes works and sometimes doesn't work for us. The democracy in collaboration is good because you have the benefit of many people's thinking but you also have people coming from different perspectives, so it can take a long time to pin something down. Sometimes we don't have that time when there is a performance coming up. Taking a long time to create something together can sometimes kill the momentum of creativity. And your hour disappears very quickly. (Graham McCarthy)

I found that adopting a team facilitation approach, where there were at least two facilitators in any band, was a supporting factor for collaborative practice in this study. This was particularly important if there were more than one member with

profound physical disabilities using DMIs. Jessica, a Till 4 band facilitator, described her perspective on the need for team facilitation within an inclusive music band:

It takes so much man-power because there are so many different elements. Like this project could not work with one teacher. If I had to teach the band on my own it would also be ineffective. It would be bad practice. If you were by yourself you would be rolling the dice hoping that the students are being included. Even with setting up the technology you need another person for that. Like the complexity of the learners, the different ages, the different skill levels. You need a team teaching approach for that. (Jessica Cawley).

Muireann, classroom teacher at SDC, also stressed the importance of having a team facilitation approach for Till 4. She describes what she felt each facilitator brought to the work:

You brought your experience, Rory was bringing the instruments aspect, Rachel was bringing the music aspect and then you had the iPads and Soundbeam. I think that was key. It needs at least three facilitators (Muireann O'Shea).

I discovered that the facilitators felt more comfortable working as a team, when facilitating inclusive practice in each band. Rory felt a team facilitation approach was crucial to the inclusive music practice in Till 4:

There was enough of us there to make sure that inclusion was happening. I think the team thing is definitely important in this particular project. It is hugely important. It really, really, really, helps in this situation (Rory McGovern).



Figure 37: Rory from Till 4 working with Josh and Shauni on Keyboard

In addition to a team facilitation approach to supporting collaborative practice in the three inclusive bands, I learned that collaboration between the classroom teachers, SNAs and the Till 4 facilitators was deemed to be vital. Patricia, the principal at SDC emphasised the importance of collaboration between specialists and classroom teachers:

The collaboration between the specialist and the music teacher is hugely important. If we were to start the project again, I would definitely say that it would be good for the teachers and SNAs to sit in on it a little bit more. (Patricia Harrington).

However, according to Patricia, from SDC, ‘collaboration’ is ‘where the challenge lies.’ in the Till 4 band (Patricia Harrington). I felt these challenges related to the time constraints felt by both the facilitators and classroom teachers throughout the Till 4 project. I encountered that finding the time for communication and coordination relied upon the good will and personal time of all involved in the band. To address this challenge, I tried to implement a digital system that could facilitate regular communication between classroom teachers,

SNAs and band facilitators in a more economical way via Google documents.¹⁹⁰ Material, ideas and feedback from each session were recorded using this system, however, both the facilitators and the classroom teachers felt that this digital approach wasn't as successful as personal meetings.

Collaboration between band members, facilitators and local artists, was a key feature in the Mish Mash band. The most prominent collaboration took place with GMC (Garry McCarthy), a local rap artist and music producer in Cork City. Garry had a very positive impact on the cohesion of the Mish Mash group during the early stages of the project, as the first activity was to write a rap together. Mish Mash members, Riobard, Kevin and Aoife, particularly felt very positive about GMC's involvement as they regarded him as a role model for their own creative music making: 'Every time I meet Garry. He is a good rapper. Every time I see him I look up to him. I listen to him all the time. He is good at the iPad. I'm good at the iPad now too' (Riobard Lankford). Kevin outlined his experience of writing and performing his own rap with Mish Mash with the following: 'I enjoyed the rapping. Very Much! It was good. It was hard work but it was amazing. That's it really. I think we're brilliant'. (Kevin English).

As can be seen from the above experiences, collaboration for the most part was a very positive and supportive feature of the informal inclusive music practice in this study. In the upcoming section, I describe the importance of providing a space where band members freely explored and adapted diverse

¹⁹⁰ Google Docs is a free web-based application in which documents and spreadsheets can be created, edited and stored online. Files can be shared and accessed from any computer with an Internet connection, in order to collaborate with other people in real time. More information on Google docs is available at: <https://support.google.com/docs/answer/49008?hl=en>

instruments and styles.

Adapting Diverse Instruments and Musical Styles

I learned that exploring and adapting a range of diverse instruments and styles of music, enhanced meaningful experiences of creative music making in all three bands. This approach reflects Adamek and Darrow's (2005) guidelines for diversity and adaptations within inclusive music classrooms. The instrumentation and choice of repertoire in the Till 4 weekly rehearsals varied, depending on the interests of the band members. Jessica the band facilitator in the Till 4 band described this process as,

Like it's open to different styles, different repertoires, different instrumentation. It needs to be flexible because there are so many viewpoints. You can't be pinned down to one musical genre. (Jessica Cawley).

Such exploration of instruments provided new musical experiences for most band members, particularly for students from SDC. Patricia, the principal at SDC, recounted her school's approach to instrumentation and music learning:

We showed children loads of instruments. We had them playing drums, we had them playing chimes, we had them kind of playing all the different percussion instruments, but we never actually tried them with anything else. You know, I don't know why. (Patricia Harrington)

One particular student from SDC learned how to play the saxophone and is still receiving weekly individual lessons as part of the SoundOUT programme. The saxophone, according to Patricia, was an instrument they would have never thought of introducing to their students at SDC.

A wide range of instruments, beyond conventional band instruments was used in Till 4. The creative use of DMIs, an issue which is discussed in more detail in Chapter 9, opened a wide palette of new sounds, as well as opportunities for students to play music in a band - students who were previously marginalised. According to Rory, the band facilitator in Till 4, ‘everything that makes a sound is a musical instrument, as far as I’m concerned’ (Rory McGovern). This open-minded approach to music and sound diversity within Till 4, has led to the production of a rich-electro-acoustic sound in each band.

From the beginning of Till 4, I customised instruments and methods of playing them, in order to accommodate diverse learning needs in Till 4. Rory from Till 4, described this process as ‘I suppose you have to adapt to a given situation’ (Rory McGovern). Muireann, the classroom teacher from SDC, stressed that because of the adaptation of instruments and approaches in the Till 4 band, ‘everybody was able to do something’ (Muireann O’Shea).

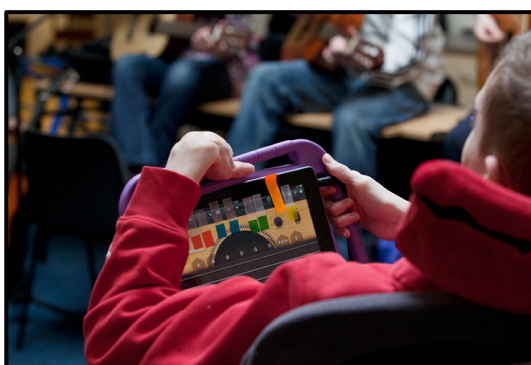


Figure 38: John from Till 4 using colours to play chords on iPad

For instance, Danielle, a member of Till 4, described the importance of using colours to make the chords on the piano more accessible: ‘When we’re playing the songs I like to play the piano. I use stickers for each part. A different colour for each part. It’s easier with the colours’ (Danielle Kelly). John, also a Till 4

member, stressed that the use of colours was very useful to him when playing music on the iPad: ‘The colour codes were very good. They were good to find all the different notes and stuff.’ (John O’Shea). The use of coloured stickers as an accessible way of representing chords and melodies was also implemented in the Mish Mash band.

Providing a range of instruments to explore, choose and adapt was also a prominent characteristic in Mish Mash.



Figure 39: Christine from Mish Mash playing Soundbeam

When asked to describe the instruments used in Mish Mash, band member Karl recalled that,

We use a lot of musical instruments. We have Aoife on the wind synth; we have Jenny on the Soundbeam. We also have the iPad and the Magic Flute that you can make music on too (Karl Murphy).

There was more of a focus on using DMIs to create original electronic music in the Mish Mash band, as opposed to the other two inclusive bands. Some members explored DMIs, as they were unable to access other instruments due to physical limitations. However all DMIs offered access to a wide palate of sounds, which were explored during rehearsals. The group also chose to engage in original music production and recording on a weekly basis. To ensure

members felt ownership of this process, I supported them to create specific music production ‘jobs’, with a view to making this production and recording process accessible for all abilities within the group. ‘Job sheets’ with specific steps were created for the roles of performer, recorder and organiser. These ‘jobs’, described in Chapter 6, enabled multi-layered engagement by all members, epitomising the ‘UDL’ principles.

The continued exploration of diverse instruments and styles of music was also a large aspect of the Circles creative process. The collaborative creation of original music was fundamental to Circles. Graham, the Circles band facilitator, emphasised that the group ‘ultimately writes original music. We did try to do covers but we never stuck to it’ (Graham McCarthy). He described the process of creating new songs using a range of diverse instruments:

When we started writing original music, everybody swaps instruments. It gave an opportunity for everybody to try out new instruments. People stepped out of what they were used to try new things. I found that this worked as a good approach for creative music making as it yielded unexpected results. I have heard that when writing music: try it on an instrument you are not familiar with (Graham McCarthy).

The instrumentation and musical style of a new composition was influenced by a combination of factors, including the availability of instruments at the TMP, Cillian’s passion for song writing and the group’s interest in ‘jamming’. Graham from Circles signifies that develop work that reflect the interests and influences of the individual members in the group was important:

Circles has a basic pop/rock feel with drums, bass, keys. It is a combination of the instruments and the shared influences of the band that led to the original style of music created. It’s important that it comes from them. (Graham McCarthy)

The TMP often had members joining and leaving the TMP programme, which resulted in different musicians joining Circles on a regular basis. He stated that this regular alternating of band members had an impact on what instruments and styles Circles engaged with: ‘There are lots of people coming and going from the project, bringing different influences and styles. Circles change as the members change’ (Graham McCarthy). From a band facilitators perspective, Graham emphasised that this multiple entry and exit points to the band offered inspiring, rich influences and kept the creative practice fresh. In the following section I outline the experiences of performance and its perceived role in each of the three inclusive bands.

Performance

All three inclusive bands participated in a wide variety of performance activities throughout this research period. Performance in this study refers to a sharing of live music with local communities, on stage in a concert hall, school hall or community centre. The partnerships that were developed with various organizations and networks were essential in facilitating each inclusive band to perform in a wide range of venues in Cork City. These partnerships supported the evolution and sustainability of the bands. As described earlier in this chapter, this process reflects the ‘Connections and Heterogeneity’ principles within the Rhizome Theory.

Many research respondents emphasised the significant and positive role of performance in facilitating meaningful engagement in the inclusive music bands. They suggested that experiences of being ‘in the zone’ or having ‘flow’, was particularly present during performance activities. For some members

performances enabled them to make unique contributions to the vibrant musical life of their local communities and the wider city, an opportunity that wasn't available prior to being involved in the inclusive bands.

Enaging in regular performances was a core element of the Circles band. I observed that the group seemed at their most cohesive during performances. Graham, from Circles, supports this observation through his description of performances:

When we did the gigs and performances, one thing really struck me. Cillian came in perfectly and he came in bang on the first note. I was looking at him and he was looking at me and it was a music moment. Perfectly. We were in a band. It's worth it when those moments work. (Graham McCarthy)

Circles band member, Cillian explained how he uses the idea of him performing on stage with the band as a motivator to achieve musical accuracy within the rehearsals. Angela, his mother, recalled his description:

One day you [Grainne] said to Cillian, 'you did really well today' and later that evening he said that he had put himself on a stage in his mind and that's why he was bang on that particular day that he got everything right. (AngelaMcSweeney)



Figure 40: Circles performing at Mad Pride Festival, Fitzgerald's Park

Over all performance was deemed a very positive aspect of the Circles project. Graham from Circles suggested that performances ‘renew the group. They help to return perspective. You get to see the bigger picture. Performances spread the message!’ (Graham McCarthy). However, I discovered that having too many performance commitments affected the collaborative process in Circles. Graham, Circles band facilitator, emphasised the benefits of performances such as focusing the group to get a piece of music finished. However he also articulated the challenging aspects of having too many performances:

The bad thing is it can sometimes lessen the democracy element when trying to finish a piece. I try to facilitate the group to come as close to the finishing line as possible but I sometimes have to put the finishing touches to the pieces. Having too many performances can sometimes put us under pressure. (Graham McCarthy)

Circles performances had a deep and positive impact within disability services, according to Miriam, Cillian’s person-centered planner at Enable Ireland disability services. She suggested the model of inclusivity, championed by Circles, epitomised what are trying to achieve.

Performance was also viewed as a very positive aspect of Till 4. Cian, a Till 4 band member from SDC, described his experiences of performing with the band as ‘Brilliant! Everyone enjoyed it. Everyone started clapping and dancing. It was brilliant.’ (Cian O’Sullivan). Many of the students from SDC had significant experience of performing within their own school environment; however, Cian suggested that the Till 4 performances were different. He described both performance experiences: ‘When we performed before [in SDC] we used rainbows and moved our hands, but now it’s like a real band’ (Cian

O'Sullivan).¹⁹¹ When I asked Cian to explain what he felt was a real band is, he began to talk about the use of instruments including drum kits and guitars. He also highlighted the involvement of the students from TMS as significant: 'It's like playing real instruments and having different people in the band. And that's what makes it better'. (Cian O'Sullivan). John, a band member from Till 4, also highlighted the enjoyment aspect of the Till 4 performances. He exclaimed that the 'concerts are great craic!' (John O'Shea). This sentiment is reflected by all the responses from the Till 4 members, including Shauni from SDC: 'It was class!!' (Shuani Breen). Many students advocated for more performances: 'I think we should have way more performances' (Stewart Murphy) as they felt it was one of the 'main things' of the Till 4 (Darren O'Leary).



Figure 41: Cian from SDC and Darren from TMS performing in Cork Opera House as Till 4.

I observed that performance was also a very positive and motivating aspect for Mish Mash band members. Their first performance was part of 'Culture Club' in

¹⁹¹ The use of rainbows and movement refers to a project that was undertaken in SDC that focused upon colours and movement using Soundbeam technology.

November 2012.¹⁹² Mish Mash performed a new composition, which incorporated a rap created with GMC. Mish mash member, Kevin, emphasised that ‘the concert was very good. I enjoyed it very much. Ya definitely it was very good’ (Kevin English). He revealed that Mish Mash performances have become a family occasion: ‘Mum, Dad, and all my friends go to the concerts. It’s brilliant. They think my rapping is very good.’ (Kevin English). Jenny, also a Mish Mash member, suggested more regular performances when discussing how she feels about performing music using Soundbeam technology:

Grainne – how do you feel about performing Soundbeam with Mish Mash?

Jenny – nods yes vigorously. And points to two and month.

Grainne- we should do them every two months?

Jenny – nods and laughs

Many of the Mish Mash members stated that through performance, they realised their musical potential and love of live music making through the use of DMIs:

Mish Mash has opened my eyes to inclusive music technology. I love using Soundbeam. It just feels brilliant playing it, especially in front of a crowd when we’re rocking out. Now I know I can perform music. I couldn’t before. The experiences I have had are brilliant. The highlight for me was performing to a full house in Skibereen. (Christine Haughey).

Aoife viewed ‘gigging’ as a potential progression route to possible employment and further education opportunities: ‘I would like to go gigging more often. Like Rourke [her friend]. He is a DJ but I would like to get a rap degree!’ (Aoife

¹⁹² Culture Club was developed in collaboration with the Arts and Disability Network, Cork City. It involved the conversion of a local nightclub, into an accessible nightclub managed by people with and without disabilities. The DJ’s, VJ’s, bar staff, door staff and performers were all people with learning difficulties. Mish Mash was one of the main performance groups.

O'Sullivan). After joining Mish Mash, Aoife became a student at UCC, where she participated in the Certificate in Contemporary Living and specialised her research and work experience in the music field.



Figure 42: Kevin performing in CIT Cork School of Music with Mish Mash

For Karl, a member of Mish Mash, performance had an advocacy role to highlight the musical potential of people with disabilities:

Yes I think we should be performing. Otherwise people won't know what ability we have if we don't show them. People won't know what we can do. I think it is a fantastic job we are doing. (Karl Murphy).

The role of advocacy in this inclusive music practice is discussed further in Chapter 10. In the following section I explore the experiences and perceived role of communication in each band, particularly in relation to communicating with band members with disabilities.

Communication.

I aimed to nurture clear communication between members in all three bands, as I felt this was key to facilitating meaningful engagement in an inclusive music environment. Graham, the band facilitator in Circles, recalled the challenges he felt during his first encounter with band member Cillian:

I had difficulties realising that he [Cillian] communicates with his eyes. Also with the practical greetings stuff. Do you shake hands with somebody with a physical disability? It can be difficult working with non-verbal people when you don't have much experience. I didn't know how to actually talk to someone who is non-verbal. (Graham McCarthy)

The provision of on-going support, models of good practice, as well as provision for experiential learning, in terms of communication methods, were important in Circles. During an interview, before he became band facilitator, Graham explained how his communication strategies when working with Cillian expanded as the project progressed:

I'm developing my own communication skills as times goes on. I see you [Grainne] and Angela and I'm starting to chat away to him [Cillian]. I'm realising that the verbal stuff is the smallest part of communication. I heard that before but I'm only realising it now. Maybe that makes people anxious at first. Specifically the non-verbal stuff. Definitely for me that was awkward. I was unsure about how I communicate. But learning from ye as I go has been great. (Graham McCarthy)

Many of the Till 4 members from TMS also felt being involved in the Till 4 band had a positive impact on their ability to communicate effectively, particularly with individuals with disabilities. Till 4 band member, Stewart explained that:

I think we're learning how to control ourselves and calm down. Learning how to communicate with people. We definitely have better communication skills because of the project. (Stewart Murphy)

I found the provision of time and space for members to get to know each other was very important to support the cohesiveness in all three bands. This getting to know each other relied on effective and diverse communication skills. Graham from Circles emphasised this process:

In a group situation getting to know the people you are with all plays a part on the music. Getting to know Cillian was really important, but we had to do it differently because it is not the traditional way of communicating (Graham McCarthy).

Graham also suggested that communication between all Circles band members could have an impact on the accessibility of the music making process, particularly for Cillian:

As a group, myself and the other band members sometimes didn't have the best communication. Our eye contact wasn't 100%. We were a bit unsure and when we're unsure it is very hard for Cillian as we couldn't communicate clearly to him' (Graham McCarthy).

While acknowledging the crucial role of communication within the inclusive bands, Graham also addressed the importance of getting a balance between verbal, non-verbal and musical communication:

Sometimes talking gets in the way of the music making. It needs to be spontaneous, it needs to come from the gut or the heart. Sometimes talking can give it an artificial element (Graham McCarthy).

Unfortunately achieving that spontaneity was difficult for Cillian, as he depended on the facilitator to help him input musical ideas into his DMI, before he could make music independently. This required considerable communication between Cillian and Graham in Circles. This process posed a significant challenge for Cillian to creatively express himself. This is an issue that is discussed in more detail in the 'Creative Use of DMIs' section in Chapter 10.

Ensuring band members in all three bands had an awareness of diverse learning needs was also an important feature of the inclusive music practice in this study.

Awareness of Diversity

I found that having an awareness of diverse learning needs and motivations was important for both the facilitation and involvement in an inclusive music band in this study. Having a focus on meaningful engagement in each band, takes into consideration not only the various musical goals within the band, but also the necessary adaptations to make the practice as accessible and meaningful as possible. This balance of inclusion and individual needs resonates strongly with the Capabilities Approach.

Circles aimed to empower Cillian and all the band members to achieve their musical aims and ambitions, simultaneously. This process initially proved challenging. Graham, the band facilitator in Circles, found, during the early stages of the project, that keeping all members meaningfully engaged simultaneously was a very difficult task, particularly as people were learning at different paces. He felt that ‘a group of people working together is difficult unless everyone is working together and moving as a unit. It’s difficult’ (Graham McCarthy). When working together as a group, Graham highlighted that there were varying perceptions of what ‘inclusion’ means and he felt this impacted the inclusive process in the band. He suggested that some members would view inclusion as ‘everyone is on the same page. Ya have to keep up to scratch’ (Graham McCarthy). Graham emphasised that he found this perception of inclusion challenging ‘because obviously in Cillian’s case playing music is a lot more physically demanding’ than for the other band members. This proved difficult when some members say ‘come on let’s keep working’ when ‘everything is an effort for Cillian. For him to make music and performing is

really tiring. People need to be made more aware. Its knowing those sort of things' (Graham McCarthy). This awareness of Cillian's needs, combined with the needs of the band members from TMP, led Graham to adapt the way he structured the band rehearsals. Each Circles band member, including Cillian, began to explore creative elements of the Circles songs, during individual lessons. They subsequently brought those creative developments to the group to work on further as a group. This process provided a space for Cillian to choose notes and sounds in advance of rehearsals, without the pressure of doing it quickly during the allocated rehearsal time. It also provided a space for band members to creatively contribute to the group in a meaningful and valued way. Also to ensure Cillian didn't get too tired while playing with the group, Graham incorporated regular breaks for the whole group.¹⁹³ I found this change in structure fostered more meaningful engagement for all members, as Cillian had space to choose parameters for playing in advance of sessions, and the other members had more creative input and playing time during the rehearsals, without being interrupted by technical elements of using the DMIs.

I discovered it was important to regularly strengthen an awareness, both amongst members and beyond, of what inclusive music bands concerns, i.e. meaningful engagement of diverse learners equally in the same environment. Some issues emerged in Circles relating to the creation of that inclusive music awareness. Graham discussed the challenge of ensuring the person with disabilities is not too much on a pedestal within an inclusive band, as he felt that could also impact the inclusivity of the work and potentially make it tokenistic.

¹⁹³ The band had contact time for 1 hour as opposed to 2 hours.

Perhaps due to the uniqueness of the inclusive band and the technology used by Cillian, this was an issue that regularly arose, particularly during performances. Cillian was often the focus of attention more so than the other band members, an aspect that Cillian was not happy about. He wanted to be treated as an equal member of Circles. Graham advised that,

There is a danger that the person with a disability becomes the spotlighted person. I've heard it as we go along that people are saying Cillian's band. Cillian's song. I say it too. It's an equal thing. Everyone contributed to it. It's a band song. And it should always be represented that way. (Graham McCarthy).

The importance of emotional awareness was strongly emphasised by Jessica, the band facilitator in Till 4. She recounted her evolving relationship with the word inclusion and how it impacted the way she engaged with the Till 4 band. When she first became involved in the Till 4 band, she stated that she took the word inclusion very literally, however her view evolved as the project progressed:

I had this obsession from the very start that every student should be playing, whether they want to or not. I wanted people to be included. I was like if there is a smaller band, you're automatically excluding people. That word inclusion loomed over me. Now I know that you can be in the same room or be a member of a group and still be excluded within the group. I realise now that the nice thing about the word inclusion is that it applies to all students, not just the people with disabilities. You're still identifying what each kid needs. (Jessica Cawley)

A focus on the individual needs and ambitions of each member of a band, as espoused by the Capabilities Approach, moves beyond the view of inclusion as just placing individuals in the same room. Jessica's evolved understanding of inclusion brought about the realisation that emotional awareness and sensitivity

is of the utmost importance within inclusive environments:

You need serious powers of observations to work within inclusive settings because if you don't recognise that someone is being excluded, you can't help them be included. You need to have the ability to read and engage your students. Like be aware of their needs and emotions. (Jessica Cawley)

I propose that awareness, sensitivity and observant skills, which are interdependent, are necessary attributes for music facilitators within inclusive band settings. Ensuring members had freedom of choice in terms of their involvements in each band was also a prominent and important feature of the inclusive practice in this study, a method that is discussed briefly in the following section.

Freedom of Choice

The provision for freedom of choice is a central aspect of the Capabilities Approach. Having the freedom, to both join Circles and how to participate in weekly rehearsals, was very important for Cillian. Angela, Cillian's mother, highlighted that the type of music that was being played was exactly what Cillian wanted to play:

I think the type of music you were doing. He wasn't just sitting at the drum and watching others. It was something he liked. The technology and the switches he could use them. He had a choice. That's so important for him. (Angela McSweeney)

When asked about what is important about Mish Mash, band member Jenny, emphasised that people with disabilities are given a choice to make music, by the accessible approach in the band:

Grainne: what do feel is an important element of Mish Mash?

Jenny: Jenny points to 'understand' and 'wheelchair' and points to me.

Denise: the music is accessible through Grainne?

Jenny: nods.

Denise: you know (Denise points at Grainne) that she (Denise points at Jenny) is in a wheelchair and she still has a choice to make music. Is that right Jenny?

Jenny: nods yes.

Karl, who is also a Mish Mash band member, emphasised that the provision of choice was crucial for him being involved in the band. He describes that the provision for the freedom of choice in the music making approach in Mish Mash 'gives people a chance to explain what they want and how they want a piece to develop.' (Karl Murphy). He suggested that this is why he returned to playing music again. He was given a choice. He stresses the important role DMIs play in the provision of choice for members who do not have the chance to play conventional instruments:

Look at Jenny, she uses her iPad to explain what she wants. She can decide which words, sounds, and notes when wanted. I think you have to give people choices or it won't work. (Karl Murphy)

Aideen, another Mish Mash band member, echoes the significance of DMIs in offering members with disabilities the opportunity to choose to play music:

The technology gives people with difficulties the choice and opportunity to learn music or not. An opportunity they wouldn't have if they were using normal instruments. (Aideen Carroll)

The perceived fundamental conditions for the development of inclusive music bands are presented throughout this chapter. These include the development of partnerships for harnessing resources and supporting 'lines of flight', combined

with informal and collaborative music practice that fosters creativity, diversity and freedom of choice in a safe environment. In the following Chapter 9, I describe the perceptions of using DMIs for creative music making and learning in these inclusive environments. I also present the personal outcomes of participants, where I particularly focus on the experiences of members with disabilities using DMIs in the inclusive music bands.

Chapter Nine

Findings: Creative use of Digital Musical Instruments and Personal Development

Introduction

The creative use of Digital Musical Instruments (DMI) was vital in all three of the inclusive bands. Similar to the flexible approach to developing partnerships and inclusive practice, discussed in the previous chapter, each DMI was customized to support each individual musician to follow their unique musical ‘line of flight’. By challenging conventional approaches to utilizing DMIs, heightened meaningful engagement in music making and learning for band members was made possible. As a result, rich and diverse personal development experiences abounded.

In the first section of this chapter, I present the findings that relate to the third theme in this study: Creative Use of Digital Musical Instruments. In the later part of this chapter, I explore findings relating to the fourth theme: Personal Developments. Similar to Chapter 8, these findings are supported by contributions from families, band facilitators and other partners.

3. Creative Use of Digital Musical Instruments

I begin this section with a brief recap on the DMIs used in the inclusive bands and I follow this with an account of the responses from research participants when discussing their experiences of using DMIs. I describe how DMIs were

adapted to enhance creative independence in music making and learning in each band. Using and adapting DMIs in the bands presented a number of challenges for me, and the band members and I discuss these challenges in the closing paragraphs. I conclude this section with a discussion of the future development of DMIs, as proposed by the research participants.

Combinations of commercially available and recently developed DMIs are used in Circles, Till 4 and Mish Mash. As described in Chapter 3 of this thesis, DMIs incorporate both software and hardware elements. The hardware refers to MIDI controllers, which act as an interface between the performer and the musical sounds. The musical sounds are performed by connecting these MIDI controllers to both DMI specific software and industry standard music software, including Propellerhead's Reason or Ableton, which is usually run on a computer. The DMIs used in the bands are: Soundbeam beams (movement sensor); the Magic Flute; Roland Wx5 wind synth (wind controller); the EyeHarp (eye gaze sensor); and Soundbeam switches (pressure sensors). Each DMI was used and adapted to accommodate the individual needs, movement patterns and musical ambitions of the performers in the bands. Many of the performers who used DMIs in the bands, had no prior experience of playing conventional instruments.

Responses to using DMIs.

For the most part, research respondents experienced and perceived DMIs to be positive additions to the three bands. Circles member Cillian, had a very positive experience of using Soundbeam in the band, and he strongly advocated for the

integration of DMIs to be used in more often music bands, in order to make bands universally accessible. Below is an excerpt of a discussion I had with Cillian about the use of DMIs for music making and learning:

- Grainne:** Are you happy about using technology to play music?
Cillian: Nods his head vigorously with wide smile.
Grainne: Do you think it's a positive thing to have technology to access music and being in a band.
Cillian: Nods yes.
Grainne: Do you think it should be used more often in bands?
Cillian: Nods head.

Cillian chose to use Soundbeam, as he felt it was an instrument that could provide the most access to independent and meaningful music making for him. He claims that 'it has been great to be able to use it as an instrument. I like the choices it gives me. It allows me to play alongside the others in the band' (Cillian McSweeney).



Figure 43: Cillian from Circles playing Soundbeam

John a Till 4 band member from School of the Divine Child (SDC), was equally positive when describing his experience of using Soundbeam and iPad technology in Till 4:

I think the Soundbeam is brilliant. You can do different stuff and learn with it. It's good to get everyone involved. I love playing the beam and iPad together. I move my hand up and down in the beam and it makes brilliant sax sounds and then I make up different beats on the iPad or I can learn to play the guitar, like do chords on the iPad. It's good. I couldn't do it before. (John O'Shea)



Figure 44: iPad being used to play chords

Danielle, also a member of Till 4, described the Magic Flute¹⁹⁴ as 'strange at the start but after a while I got used to it and then I started to like it' (Danielle Kelly). The garageband application on the iPad was Cian's favourite tool: 'The iPad is good because garageband has a drum kit, electric guitar and everything. I love it.' (Cian O'Sullivan). Jessica, the Till 4 facilitator, indicated that she felt the iPad was a DMI that the students particularly bonded over:

The iPads are cool. They know the interface, so it's familiar. It's trendy, so there is a bond over it. It automatically linked the students together. Like Darren and Cian were like my god you have an iPad. So the technology [Soundbeam, iPad and Magic Flute] seems to be bringing the students together, not separating them as I thought it would, but that was probably just a worry of mine. (Jessica Cawley)

¹⁹⁴ Danielle used the Magic Flute during the introduction sessions to Till 4.

Riobard, a member of the Mish Mash band, expressed his preference of using the iPad as a musical instrument in the band. He also emphasised that he enjoyed using Soundbeam for solos when he was describing past performances:

I think the iPad is better in Mish Mash. I think they have more things on the iPad. I can get all the good sounds. All the sounds. Any sound. I liked the Soundbeam too when I played by myself in city hall and when we did the rainbow piece in UCC. I played in city hall with the orchestra. I danced and made sounds with the Soundbeam. But I prefer the iPad in Mish Mash. I can do it at home. (Riobard Lankford)

Mish Mash member Aoife tried a variety of instruments during the initial band rehearsals, however she maintained that she preferred using the Roland Wx5 windsynth, as she perceived it to be more challenging for her to learn, as opposed to the Soundbeam. According to Aoife ‘the Soundbeam has like more music. It has more production in the background. I think it is preset. The wind synth has not. I like learning it’ (Aoife O’Sullivan). She stressed the importance of being challenged and having the opportunity for further her musical learning and progression. Aoife also emphasised that she would like to learn more about the iPad and music production:

I love the iPad. I want to do more of my own music at home. I like the beats. All I have to do it put my raps into it. Produce them. You can be my producer. Riobard can be my backing singer! (Aoife O’Sullivan)



Figure 45: Aoife from Mish Mash playing Roland Wx5 wind synth

Christine, also a member of Mish Mash, claimed that Soundbeam was her favourite instrument to use in the band. She describes below how she learnt to use the DMI in rehearsals:

In Mish Mash I use Soundbeam. I learnt to use it with Gráinne. She taught me when to start and stop with the music. I'm included in the band and have my own role to play. I never had that before. (Christine Haughey)

Many research participants referred to the aesthetically positive influence of combining digital and acoustic sounds in the inclusive bands. Jessica, the band facilitator in Till 4, observed that 'aesthetically it's nice to have a mix of both acoustic and technology instrument in a band. It gives it a richness.' (Jessica Cawley). Margaret, co-ordinator of Music Generation Cork City (MGCC), also refers to this digital and acoustic combination:

What's really powerful in the bands is that meeting of technology and the acoustic. The two complement each other. I think it's really interesting to see how the technology is not dominant in any way. It is integrated. It's like they're just other instruments. (Margaret O'Sullivan).

Josh, a Till 4 band member from Terence MacSwiney (TMS), also concurred that he felt the use of DMIs in a band is 'good like. The sounds are class. The technology gives a bigger sound' (Josh Crean). Deana, also a Till 4 member from TMS, suggests the DMIs brings a unique and progressive sound to the group:

It sounds different. Other bands sound all the same because they have all the same instruments but ours sound different. We have different instruments. They are fabulous. There is a lovely sound off them as well. (Deana Purcell).

When discussing the creative potential for DMIs in inclusive bands settings,

varying perspectives emerged. All the facilitators in each of the three inclusive bands felt the approach of connecting multiple DMIs to a laptop was ideal to use for creative music making in band settings as it had the ability to connect to high quality digital sounds using the Propellerhead's Reason or Ableton. According to Rory, the Till 4 band facilitator, having access to a range of MIDI controllers and sounds is important for creative music making using DMIs. He suggests that,

The ideal setup for using this technology is essentially a laptop as a brain for everything and having MIDI controllers of different types. It could be motion sensors like Soundbeam, it could be Magic Flutes or it could be just a thing with buttons. It can all run through the one software on a laptop.
(Rory McGovern)

Dave, a band member from Circles, suggested that technology was becoming normalised within the wider music industry, which he felt could have huge inclusive and creative potential for non-conventional musicians in bands. He stressed that,

Through technology people who don't play conventional musical instruments can definitely be involved in a band; I think technology has taken over a massive part of music. (Dave Barrett)

Graham, the Circles facilitator, also reiterates this sentiment when he suggests that,

Music is a lot of the time about electronic instruments now. What Cillian is using is not really that complicated compared to what others are using. Look at LCD Soundsystem for example. The use of technology is becoming normal in bands. (Graham McCarthy)

When considering how DMIs could facilitate creative music making within inclusive band settings, Graham was initially sceptical about using Soundbeam.

He described his first impression of Soundbeam being used as a creative instrument in Circles:

I was very sceptical at the beginning. I didn't think it would cut it...I looked at the beam and went. Agghhhh it's a token gesture. I suppose I hadn't seen it in a musical, specifically in instrumental setting before. It is just new I suppose. (Graham McCarthy).

Circles band member, Dave, also discussed his initial unconvinced attitude of using Soundbeam as a musical instrument in the band:

Being included in a band is great. I think it's a definite yes. But as regards is it a musical instrument? If I was playing that, if I was Cillian and knew the notes were all pre programmed then I wouldn't like it. I wouldn't say it's as meaningful as other instruments. (Dave Barrett)

However in a later interview Graham emphasised that his opinion of using Soundbeam expanded considerably, particularly when he saw how it could be adapted to accommodate Cillian's specific abilities and creative ambitions:

I think of it now in one of the songs – 'Everything We Did'. Cillian uses it for the long note over the end of it. I look forward to that note. Because I do like that note. I'm waiting for a part to be played on an instrument. (Graham McCarthy)

Josh, Darren, Deana and Stewart, all Till 4 band members from Terence MacSwiney (TMS), emphasised the positive impact they felt DMIs could have for students with disabilities participating in inclusive bands. Stewart suggested that the use of DMIs in Till 4 gives all students 'a chance to do music. A lot of people with special needs don't really get a chance to do anything normally. It's a good chance for them to do something.' (Stewart Murphy). Josh advocated for DMIs to be available for every band, not just in Till 4, as he felt they are:

Good for people with cerebral palsy. They can't hold an instrument, but

they can play things like the Soundbeam. It's great. It gives us a chance to work with the lads from SDC. It gives them a chance to do it too. Everyone thinks that they can't do anything just because they are disabled. But they can. They can do stuff too. Everyone deserves a chance. (Josh Crean)

Darren agreed with this statement, as he felt that using DMIs in Till 4 was 'good because it's a chance for the lads from School of the Divine Child to do music like us.' (Darren O'Leary). Deana, remarked that 'never saw technology like that in my life. I only ever heard of the piano, guitar and that. I never heard of the Soundbeam or anything like that. It's brilliant like.' (Deana Purcell). Darren described how he learnt how to use music technology equipment, including DMIs, during the Till 4 rehearsals and perceived this to be an invaluable experience:

Ya I have learned a lot. I learnt an awful lot during the project - with the new technologies – the iPads and the Soundbeam and all the mics and the PA system. I learnt all about that, as well as playing an instrument. I think it's really good to know that stuff. (Darren O'Leary)

Cian, a Till 4 band member from SDC, advocated for DMIs to be made available for all school music bands, as he felt,

You need Soundbeam or the Magic Flute or something like that, to make music if you have no hands and can't speak. You can use your legs or your head to make the sounds you want. You can still be in a band then. It's cool. (Cian O'Sullivan)

Muireann the classroom teacher at SDC, also advocated for DMIs to be available in all inclusive music classrooms in order to provide access for students with limited movements. She maintained that music is a 'great leveller, because regardless of whatever disability a student has, all of us, have an interest in music

and that is the leveller'. (Muireann O'Shea). Patricia, the SDC principal, particularly encouraged the use of Soundbeam 5 for use in inclusive music classrooms as she felt,

The new Soundbeam is lovely. It has its limitations as well but it's very user friendly and is being used much more here. It is being used by our music teacher here all the time. (Patricia Harrington)

When discussing the potential role of DMIs in the Mish Mash band, members felt they were crucial to ensuring high quality and independent music making was accessible for all members in the band. All members had prior experience of using DMIs in previous music projects, either as part of Cork Music Works (CMW) or in their disability services.

Mish Mash member Jenny highlighted the inclusive potential of DMIs by indicating their importance for including people with disabilities in music:

Grainne: Are there specific things that make it easier to be involved in Mish Mash?

Jenny: Nods

Grainne: Like what?

Jenny: Points at iPad and Soundbeam.

Grainne: Using technology?

Jenny: Nods

Grainne: Do you think its good to include technology in a band?

Jenny: Nods vigorously. Jenny points to wheelchairs.

Denise: Is it good to include people with disabilities?

Jenny: Nods vigorously

(Jenny Garde & Denise Bermingham).

Adapting DMIs for Creative Independence

While the responses to using DMIs for music making and learning was

overwhelming positive, almost all research respondents emphasised the necessity to adapt them, beyond standard use. In this section I present the experiences of adapting DMIs in order to enhance meaningful engagement and creative independence when making and learning music in each of the three bands.

Adapting DMIs in Circles

Creative independence, where DMI users are able to choose, manipulate and play notes independently, was a recurring theme, particularly when interviewing Cillian from Circles and his family. Angela, his mother, highlighted that using Soundbeam technology was very important to Cillian. She felt it was not ideal but it was one step further to independence for him. She related this to the ‘the fact that there are switches [on the Soundbeam]- he can now do it on his own. More independence when using technology is so important for Cillian’ (Angela McSweeney). Cillian always emphasised his enjoyment of music making, however he also regularly highlighted his ambition for more independence when composing and performing music, either with Soundbeam or with DMIs of the future. He emphasised that he looks forward to every music session and performance and hopes ‘to work the Soundbeam independently in the future. To date the Soundbeam has been the only way for me to access and play an instrument’ (Cillian McSweeney). Since the beginning of Circles, Cillian, Angela, Graham and I have been continuously exploring new options for Cillian to engage more independently in music making and learning. Graham from Circles stressed that ‘the more creative control Cillian can have over the melody he composes the better. Cillian needs to have a say in the creative process – if not inclusion falls apart’ (Graham McCarthy).

As Circles prioritised creating original music, I felt it was necessary to adapt the Soundbeam in order to facilitate the widest possible parameters for Cillian to independently explore, compose and improvise music with the band. As described in Chapter 6, Circles band members often engaged in improvisatory activities, ‘jams’, to create original music. This process was curbed for Cillian as all keys, note sequences and sounds (these three elements combined is known as a setup) needed to be pre-programmed in advance. To address this creative limitation, I adapted the switch interface to be used as both a performance controller, as well as a navigation tool, which had the ability to move between multiple setups. Even though this did not fully address the lack of creative independence in choosing notes and sounds in real time, this ‘multiple setup’ approach greatly enhanced Cillian’s creative music making ‘capabilities’ in Circles. Further facilitation adaptations by Graham also enhanced Cillian creative input into original songs using Soundbeam, thus enhancing his meaningful engagement in the creative process. Graham described this process below:

Sometimes with technology you always expect the outcome because you input it. I try to mix it up by adapting the way I use the Soundbeam. We often use random pitch sequences, where we don’t know the exact pitches or progression. We then try to incorporate them into a piece and adapt on the spot, by transposing or changing sound to see if there is any interesting synchronicity when we are jamming. It’s almost like a random approach to free jazz. It’s important to clarify that Cillian is playing the rhythm of these pitches as we go. That’s how we got the melody for the song ‘Moving Further’. (Graham McCarthy)

By exploring the parameters of the Soundbeam, Cillian identified certain methods of playing the DMI that were more suitable than others. For example

Graham described why Cillian never plays percussion in the band:

We have never used the Soundbeam for percussion as it's repetitive and consistent. It's too difficult for Cillian to keep going with that. We have tried it but it didn't really work. It was too difficult. (Graham McCarthy)

Both Cillian and Graham indicated that adapting the Soundbeam, through multiple set-ups and improvising freely to come up with musical motifs, provided a more meaningful way for Cillian to play music with the group. Also Graham suggested this was particularly enhanced when Cillian used the switches. He argued that this is due to the haptic feel of the switches:

I suppose the switches, in contrast to the beam, has a direct, percussive feedback feel to it. I feel like we are both performing when he is playing the switches. He is hitting something. That's a bit of the crux of it. It's a physical contact thing. It's coming right out of you into something. Sometimes with the beam, the movement you make doesn't really reflect the sound that comes out. (Graham McCarthy)

The backing up and documentation of Soundbeam arrangements was identified as a very important aspect when adapting DMIs within band settings. Graham brought up this point when discussing his process of using and adapting DMIs in Circles:

Because there are so many settings on the Soundbeam, there is a risk of potentially losing settings, for example what sound and parameters you are adapting. Documenting the settings used in each setup is important. It's risky business! You need to keep any eye on how you create a sound because it's easily lost! (Graham McCarthy)

Due to the incumbent nature of creating and adapting a new setup for each song, Graham emphasised the importance of having individual time with the Cillian, outside of the band rehearsals, in order to explore notes sequences and sounds.

This provided a space where Cillian could creatively explore without the pressure of composing in a group environment.

Circles continue to meet every week under the facilitation of Graham at the Togher Music Project (TMP). The existing need to significantly adapt DMIs to enable meaningful music making, combined with importance of creative independence for DMI users, inspired Graham to undertake further study in the area. He developed 'Digit-Eyes', as part of his MSc Music and Technology thesis project at the CIT Cork School of Music. Digit-Eyes was developed as an eye gaze accessible sampler, which can work in conjunction with E-Scape and other MIDI sequence software.

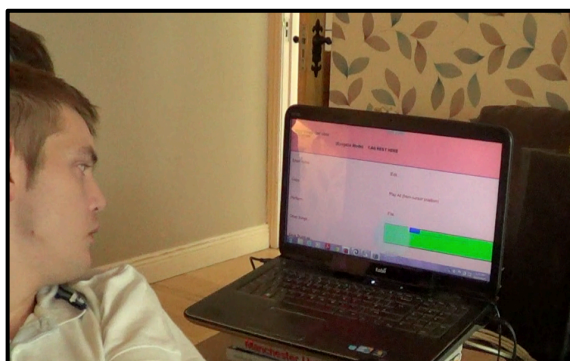


Figure 46: Cillian from Circles using E-Scape via Eye Gaze

This development has enabled Cillian to independently choose and arrange notes and chords via eye gaze technology in E-Scape and subsequently choose sounds and manipulate them in digit-eyes. He can subsequently perform these arrangements via pressure switches.¹⁹⁵

¹⁹⁵ Please refer back to Clip 9 – Eye Gaze using E-Scape and Digit-Eyes on the SoundOUT Inclusive Music Bands DVD, to see Cillian using E-Scape in conjunction with Digit-Eyes.

Adapting DMIs for Till 4

Till 4 research respondents also discussed the importance of adapting both the DMIs for increasing creative independence of band members and the DMI setup to enhance the quality of the sound in the band. All of the chosen DMIs were connected via a MIDI hub to sound generation software, Reason or Ableton live. This adapted setup, multiple connections to the sound generation software, provided high quality sounds, an element that was very important to all band members. I was the Till 4 band facilitator responsible for setting up, adapting and inputting the appropriate note sequences and sounds in the DMIs, for each student. This process was done in collaboration with the musicians, both at the weekly rehearsals, as well as during the individual lessons at SDC.



Figure 47: John from Till 4 playing the Soundbeam and iPad

John, from SDC, was the main Soundbeam player in Till 4. He mainly used the beam for improvisation purposes, often using a pentatonic scale, in the key the group were working in. He also played chords on the iPad, in combination with improvising on the beam. Similar to Cillian from Circles, individual lessons at SDC provided a space for John to explore the various chord progressions and

note sequences he wanted to bring to the weekly rehearsals. It was during this time that we discovered that the use of colours with the iPad chords was important for him to engage in learning chord progressions when playing with the group. This adapted process of using colours when playing Soundbeam and iPad together, provided enough challenge for John to meaningfully engage in the creative aspects of the group music making process.

When choosing the most appropriate DMI and subsequent adaptations for each player, consultation took place with Muireann the classroom teacher at SDC. This consultation took place in addition to the gestural analysis process, described in Chapter 3 and in Chapter 5. Muireann emphasised the user-friendly nature of the Magic Flute however, she said for students with cerebral palsy she would not ‘recommend it [the Magic Flute], or anything that requires wind, because their respiratory system is going to be the most compromised’ (Muireann O’Shea). Furthermore, Muireann felt that a lot of the DMIs would need to be developed further, in particular the Soundbeam system, as she felt they were limited in providing independence for users. She argued that,

At present the Soundbeam is not digitally interfacing. It doesn’t interface with eye gaze. It doesn’t interface with camera mouse. These are all things that our students need to work independently. (Muireann O’Shea)

Rory, the band facilitator from Till 4, also discussed this issue of independence when using DMIs in a band setting. He suggested as long as users have free reign to make the sounds they want, he felt they don’t necessarily need to know how to adapt its settings. He made an analogy between playing the Soundbeam to playing the piano:

It’s similar to a piano. Its just there you know. You can just hit the keys

and it does stuff straightaway. I suppose you wouldn't expect a piano player to be able to tune a piano. (Rory McGovern)

However, Muireann felt that if her students from SDC were using DMIs and could not adapt the notes and sounds, it would result in them being limited to having access to only one setup and relying on people to turn on the DMI everytime they wanted to play.

Adapting DMIs for Mish Mash

Mish Mash band members also discussed the issue of striving for creative independence when using DMIs. Similar to both Circles and Till 4, each DMI was chosen and adapted to accommodate the musical goals of Mish Mash band members. There were diverse and progressive levels of engagement in Mish Mash activities, where there were multiple entry points for musical expression and development. This provided challenge and opportunities for meaningful engagement for all band members. For example when creating a new piece of music in Mish Mash, two approaches evolved for music engagement. One approach enabled members to learn melodies and chords (Aoife on wind synth and Karl on digital piano) and the other facilitated members to creatively express themselves through improvisation, without the need for music theory knowledge (Christine on Soundbeam, Riobard on the iPad). We found that adapting each DMI to incorporate the use of pentatonic scales was useful for members who are new to music making as it provides a space to make music without the fear of making a mistake.



Figure 48: Jenny from Mish Mash using iPad to play chords

Mish Mash member, Jenny, used a combination of the Soundbeam and the Garageband app on her iPad, similar to John in Till 4. Parameters on both of these DMIs were adapted to make her music making and learning more accessible yet still challenging for her. Musical development was important for Jenny. She comes from a musical family and her brothers often practice music at home and she wanted a similar experience - she wanted to have an instrument to learn and practice at home. Jenny began using the iPad to trigger chords using the Garageband app. I adapted the size of the trigger area on the screen, as her fine motor skills were restricted. However Jenny progressed from having just one chord on the screen, which she played at random in a musical piece, to playing three chords in appropriate places throughout a song. She also developed the skills to use a range of effects with these chords and note sequences. Her favourite effect to use was an arpeggiator.¹⁹⁶ To compliment her chord playing using the iPad, she chose to use the Soundbeam to improvise, where she was able to refine her movement patterns to trigger appropriate notes and chords at

¹⁹⁶ An arpeggiator is often an in-built option in synthesisers. It is a feature on the Garageband app on the iPad. An arpeggiator turns whichever notes you play into a running pattern, usually playing one note after another in a repeating figure.

various tempos, during a musical piece. I often adapted the number of notes in a sequence, along with the range (length) and trigger modes (cyclic trigger and retrigger) in the Soundbeam in order for Jenny to explore and develop new skills. Jenny felt these challenges in her music making using DMIs was central to her meaningful engagement and continued learning in the band:

Grainne: do you think you have learnt much with the Mish Mash band?

Jenny: points to huge!

Grainne: How does that feel?

Jenny: points to brilliant!

Challenges of using and adapting DMIs.

There were various challenges when using and adapting DMIs in each band, however the majority were overcome throughout this research period. In the Circles band, engaging in creative and spontaneous music making with the Soundbeam was challenging, due to the fact that switches were pre-programmed, with a particular scales or sequence of notes or chords, in advance of playing. As band facilitators, both Graham and I felt this stifled the musical development and creative opportunities for Cillian in comparison to other Circles band members. Graham recalled that when using Soundbeam during rehearsals it,

Was time consuming to change between keys and scales. They have to be selected first before you can start playing. There is an option to input a series of notes of course but this all needs to be determined in advance of playing. (Graham McCarthy)

This process was difficult to implement, particularly when working within group settings. When discussing the practicalities of adapting DMIs effectively and integrating them meaningfully in group music making and learning environments, Graham highlighted this challenge of balancing the overall group

dynamics with addressing technical aspects of using DMIs. He emphasised that,

You have to be quick at choosing sounds. You don't want to spend too much time fiddling. People don't want to wait around for you to find a sound. When there is a momentum in the group, you want to catch it. You don't want to get too caught up in the details when in a creative music making situation. (Graham McCarthy)

This challenge of managing technical details and group dynamics was significantly addressed when Cillian had the time to work out specific sounds and note sequences during his individual lesson, in advance of the group sessions. However it was still not ideal for Cillian to rely on a facilitator to help him input notes and sounds. Since this study, there have been great developments in addressing this issue of creative independence, most notably through Graham's development of Digit-Eyes, where Cillian can now independently choose notes and sounds in real-time.

I found it was necessary to choose note sequences and sounds appropriate to the player's movement patterns and the DMI in question. For example in Circles, Graham and Cillian discovered that playing fast sounds for example playing percussion parts was too challenging for Cillian to play with his head:

We don't use the Soundbeam for percussion as it's repetitive and consistent. It's too difficult for Cillian to keep going with that. We have tried it but it didn't really work. It was too difficult. (Graham McCarthy)

Figuring out what 'worked' for a particular individual took time and was somewhat of a challenge during initial stages of music making and learning. However, I believe continuous adapting of DMIs was a necessary process to go through, as I discovered there was not one DMI or approach that suited all players. Each DMI use needed to be adapted to the ambitions and unique

movement patterns of each individual musician.

In the Till 4 band, many research respondents also discussed challenges surrounding the usability of DMIs. Muireann, the SDC classroom teacher, highlighted that some of the DMIs, particularly the Desktop Soundbeam, were very challenging to use in a group music-making settings in her school. She argued that technical skills and creativity were necessary to use the technology effectively with her students at SDC. She felt she had limited time to develop these skills, particularly during a classroom situation. However throughout the Till 4 band project, Muireann did feel comfortable using Soundbeam 2 or 5 as a standalone system in the classroom:

I think as an early intervention tool, Soundbeam 2 or Soundbeam 5 is far more inclusive and you can take it out quickly, you can set it up quickly and there is little fear that it's going to crash or start becoming very temperamental, unlike Desktop Soundbeam [DTSB]. It is more robust and you may have a very limited opportunity to use it in the class. Usually you may have ten or fifteen minutes, if you can get that out of the student. But if you spend your ten or fifteen minutes setting it up and then it's not working it can be very frustrating. I think you also need a lot of musical skills to adapt it. And you have to adapt it. (Muireann O'Shea)

Patricia reflected this statement by emphasising that she would be 'slow to recommend Desktop Soundbeam to other schools, as she feels it does involve a high level of expertise' (Patricia Harrington). She explained that the school explored the option of buying Quintet, a switch based DMI, however they felt 'it wasn't worth the money and it was going to be something else that ended up in a box and that was the danger with some technologies.' (Patricia Harrington).

Participants in all three bands recognised the incumbent nature of setting up the equipment for rehearsals and performances as a challenge. Jessica, a

facilitator within the Till 4 band, refers to this issue when discussing the usability of DMIs in inclusive bands:

There's a lot of gear and if we had our own building this would be good but it has to be done every week. But that's practical, that stuff. That happens in orchestras too I suppose. You have a set of stands and stuff. That happens to every music teacher. There just seems a lot with this band. (Jessica Cawley)

I found that it was useful to have the DMIs set up in advance of the weekly rehearsals, in order to avoid challenges, such as members 'waiting around' for them to be ready to play. This was particularly important for the Till 4 rehearsals, as the students from SDC were only there for one hour.¹⁹⁷ Furthermore having a dedicated member to 'look after' the DMIs was crucial in each of the inclusive band environments. According to Rory, immersion in the technology to the detriment of the teaching can be a common challenge when using technology within educational practices:

I've seen lots of examples of a teacher using technology. Some get so immersed in the technology. Its really hard not too. I've done it myself at times. It's getting the balance between the technology and using the technology. (Rory McGovern)

Similar to Till 4, the Mish Mash setup, which incorporated a multi DMI system, was also very labour intensive and ideally required a dedicated space for it to be continuously installed. However, due to limited space availability at the UCC School of Music and Theatre, this was not possible. In Mish Mash, Graham also

¹⁹⁷ A room was booked at least 30 minutes in advance of the weekly rehearsals to set up all the equipment, (sound gear and DMIs). In an ideal situation a dedicated space would be available where the equipment is permanently set up, however due to limited resources at TMS during this research period, this was not possible for the Till 4 band. In September 2014 the SoundOUT programme was offered a dedicated music space to run classes from.

highlighted some challenges when using a multi DMI setup with only one PA system. If you are far away from the speakers when you are playing, it can be difficult for band members to locate their sounds in the mix:

It can be difficult to differentiate between who is doing what sound. Especially when we are doing performances. It's a difficult band to mix. It would be difficult to engineer. You need to know the group. We take the mix and send a stereo out and we mix it from our station. The movements are tiny. The iPad and switches are difficult to register from a visual standpoint for an engineer. They don't look like what they sound like.
(Graham McCarthy)



Figure 49: Mish Mash rehearsing

There are many challenges when adapting DMIs and I continuously strive to push the boundaries further in terms of supporting technology development at educational institutions and assistive technology units at disability service providers. To address some of the technical challenges discussed above, such as the development of DMIs that are universally accessible as well as trying to simplify the complex sound and MIDI system, mutually-beneficial collaborations have emerged with various education institutes and disability services in Cork city. One such collaboration involved James Fogarty, a medical engineering student from CIT. James worked with Mish Mash, in particular Jenny Garde, to

develop a new and more accessible DMI, called Music-ability. This DMI was developed specifically in response to Jenny's movement patterns, in order to provide her with more control over the sounds she creates. As a result of this project James received the International Vicon Best Undergraduate Medical Award 2015 in London. In the upcoming section, I present the discussions that evolved during the data collection on the issue of future developments in the area of using DMIs for creative music making and learning.

Proposed Future DMI Use and Development

Discussion about the future development of DMIs emerged in many of the interviews undertaken during this study. When asked to discuss further what he feels are the necessary adaptations and future developments for DMIs to facilitate meaningful music making, Graham the band facilitator in Circles advocated for them to be more responsive to the musicians actions. He suggested that they should,

Reflect the dynamics of the movements you make. For example if you play the piano you can play softly and if you get angry you can play heavy. There should be more of a range of dynamic ability with the switches and beams. You should be able to feel and hear the emotion. So when someone hits something you can actually detect what they are expressing. There is probably scope to develop something like that - similar to a velocity sensitive key pedal on a keyboard. (Graham McCarthy)

Cillian also made recommendations for future DMI development, which he felt would make them more accessible and meaningful for him:

If I was to design my own musical instrument I firstly I would like to control the notes on the Soundbeam more easily. To do this I would have

different coloured lights on the beam so that each colour would be a different note or pre-recorded music and when I move my hand towards a specific colour it would only play that note and therefore allow me control what notes to play. I would design a dedicated laptop that has been designed specifically for sound beam with built in ports for the Soundbeam and not have to worry about the boxes etc. (Cillian McSweeney)

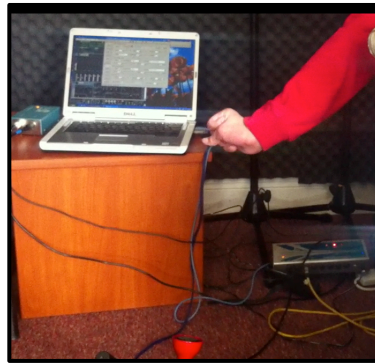


Figure 50: Cillian from Circles using Soundbeam

Graham from Circles, agreed with Cillian's suggestions, as he emphasised that 'usability is hugely important in DMIs. Plug and play is so important' (Graham McCarthy). Angela, Cillian's mother, stressed her frustration of the lack of technology development that was available to Cillian for independent music making and learning: 'I find it very frustrating because I know the technology hasn't been developed yet and you're saying come on just do it but it will get there.' (Angela McSweeney). The development of Digit-Eyes by Graham, which took place after these interviews is a large step in the right direction and has opened up a conversation with developer, such as Tim Anderson and local education institutions, as to how to develop this Eye Gaze software further.

When discussing future developments of DMIs with research respondents from the Till 4 project, band member Josh suggested that if simple adaptations were made to the use of the Soundbeam for students in wheelchairs, the music

making process would be easier to engage with:

I think if the Soundbeam had a clip to attach to the wheelchairs it would make it easier to play it rather going all the way over there [moves hand sideways]. (Josh Crean)

Till 4 band facilitator Jessica, advocated for a progression towards wireless technology. ‘I can’t wait until there’s wireless technology. I think that will be awesome! How much will that help?’ (Jessica Cawley). Jenny from Mish Mash also suggested that a wireless system would make the set-up of the music technology less laborious and more flexible for performances:

Grainne: if you could change anything about the technology what would it be?

Jenny: points to the wires.

Grainne: the wires?

Jenny: nods yes

Denise: make it wireless?

Grainne: that would make it easier?

Jenny: nods yes.

According to Muireann, the classroom teacher from SDC, speculated that we are already on the path to a more inclusive society through technological developments:

So many of us take for granted how we interact in our everyday life with concrete object - that’s no longer going to be the case in another twenty - forty years. That the majority of us will be interacting with screens, thus innately evolving into a more inclusive society. I think the next generation is going to be far more inclusive. It’s going to enable everybody regardless of their physical disability to be able to meaningfully engage with music. (Muireann O’Shea)

Tim Anderson, in collaboration with Elin Skogdal from SKUG (Norway), is currently exploring new system developments that aim to be less labour intensive when using DMIs for creative music making. These developments are continuously being discussed and adapted in response to the needs and

experiences of a newly established online network, of which, SoundOUT is a key member. This network was established in February 2015 as part of the ‘Accessible Music Technology and Practice’ seminar held in the Institute of Art Design and Technology, Dun Laoghaire (Dublin).

As can be discerned from the above descriptions, DMIs were used and adapted in a variety of ways to strive for creative independence for players. In order to expand music-making ‘capabilities’, DMIs featured as essential in the development of unique ‘lines of flight’, particularly for band member with profound physical disabilities. Using DMIs in band settings, aimed to facilitate ‘flow’ experiences for players, in order to enhance meaningful engagement. In the forthcoming section, I review the personal development experiences of band members as participants in each inclusive band.

4. Personal Development

Involvement in the Circles, Till 4 and Mish Mash bands provided opportunities for self-expression and happiness, which led to increased confidence, self-empowerment and identity development for many members. The descriptions below of personal development highlight that participating in these three bands had an impact on individuals, as well as their families and within their wider communities.

Identity Development

I discovered that identity development was a prominent personal development outcome experienced by many individuals who participated in the inclusive bands. All members stated that they felt there was a shift in both their self-

perception and their perception of others, since the establishment of the groups. Angela, Cillian's mother, highlighted that since joining the Circles band, she felt Cillian's self-perception evolved. She emphasised that,

Cillian doesn't want to be only in that disability bracket. As in "i'm the disabled" person. He wants to break from that. He just wants to be the person and I happen to be in a wheelchair. I'm Cillian, a musician, and I happen to have a disability. Rather than the other way around. I think it's possible in this band. When he is performing he feels he is not disabled. (Angela McSweeney).

Cillian stressed that creative music making and independent use of the technology is essential to his self-identification, as a participating and contributing musician rather than an individual with a disability engaging passively. He states that 'I feel very proud to be able to use it independently when I am performing. It makes me feel like a musician'. (Cillian McSweeney). At a performance at the Cork Academy of Music as part of Music Network's National Music Day in 2012, I introduced Cillian as a composer and performer. He nearly jumped out of his chair he was so excited. Afterwards I asked him why? He recounted that he felt, for the first time in his life, that he deserved and worked for that title. It was a very positive identity shift for him. He was no longer just the person in the wheelchair but now he was the 'performer and composer' who happens to be in a wheelchair. He felt for the first time he had a musical identity, which was more prominent than his disabled identity. This advocacy for a focus on musical identities resonates with Watts and Ridley's research with members of the Drake Music Project (Watts and Ridley, 2007).

Dave, a band member in Till 4, stated that over time his perceived identity of Cillian evolved as the project progressed:

When Cillian came in I got a bit of a shock. I didn't expect him to be so, what's the word, disabled. I'd never been in that situation before. So it was a lot of getting used to. Now I see Cillian differently. Like even going out to 'Electric' [local pub] after the City Hall gig, I see him differently. He is someone I now hang out with. (Dave Barrett).

In addition to band member's perception of Cillian and his own self-perception growing, Angela, Cillian's mother highlighted that her perception of him also developed. She recalled a significant conversation she had with a nurse that looked after Cillian when he was a child. She highlighted that previous conversations with this particular person usually revolved around Cillian's illness and his physical limitations. However, since becoming involved in Circles, Angela noted that there was a change in their conversation topics. The perception of Cillian's identity progressed from a focus on someone who is sick and disabled, to someone who is a fantastic musician. She described a conversation she had with this nurse as being,

Great to be able to tell his story. The disability and the sickness he had wasn't mentioned. It was all about what he's doing now. I was saying he's a musician and he has a CD out. That's was the best part for me! A focus on what he can do. (Angela McSweeney)

When discussing experiences in the Till 4 and Mish Mash bands, identity development wasn't featured as much as it was in the Circles project. The research participants from these two bands concentrated on highlighting issues of social inclusion and musical development, rather than identity development. However, the staff in each school pointed out that being involved in Till 4 provided a platform for the students to create their identities as musicians within the schools – an aspect of the work they felt was very important for the students.

In the Mish Mash band specific identities and multiple musical ‘lines of flight’ emerged in the group. For example, Karl identified himself as the piano player, who ‘held down the music for the others to join in’ (Karl Murphy). Riobard wanted to learn how to rap, produce and record music using iPad technology and Jenny wanted to learn how to perform musical sequences and pieces of music using iPad and Soundbeam technology. Each member progressed on their chosen ‘line of flight’ and as a result identified strongly as a performer on their chosen DMI. This person-centred approach provided meaningful experiences and supported individual and collective identity development in Mish Mash.

In the following section I describe how the three bands provided opportunities for members to express their identity and explore it further through music.

Self Expression

Creative music making that supports and encourages self-expression was a core element of the SoundOUT ethos and was central to all of the three inclusive music bands in this study. A core objective of each band was to provide an accessible route for members to creatively express themselves within a safe environment. For many of the members in the three bands, other avenues of self-expression was not readily available. Angela, Cillian’s mother, described how music has opened up wider opportunities for Cillian to express himself: ‘I think through the writing Cillian is able to express himself more. Through the writing he is coming up with things that I didn’t even dream he was thinking about’ (Angela McSweeney).

The topic of Cillian's first song, 'Equal'¹⁹⁸ addressed issues around exclusion and inequality that exists in our society. He also wrote songs about his own experiences of watching friends who have passed away due to degenerative diseases and his own feelings about having a profound physical disability. Currently Cillian is writing songs that are more romantic in nature. When asked about his song writing process Cillian explained that,

I have changed how I listen to music. I put myself into the words and feelings of the songs. I then use these feeling and emotions to express the words in my head to write new songs. I listen to all types of music now to help me broaden my variety of music to write. I hope to be able to learn more about how to compose music so I can put it my lyrics. (Cillian McSweeney)

Miriam, Cillian's Person Centred Planner at Enable Ireland disability services, emphasised that:

Music is a way for our service users to express themselves. They wouldn't have had it before [the music sessions in the disability services]. I wasn't aware of it before the session you did in the centre. It shows it very strongly. For some, including Cillian, it really opened them up and it definitely opened up some of the staff to looking at them in a different way and realising they have a lot of stuff to say. They suddenly realise that with a bit of support I can do this and I can let people know how I feel and no one is going to criticise me, which is nice. (Miriam Gallagher).

Angela goes as far as suggesting that by being involved in Circles,

Cillian now has something to live for. That's the be all and end all. There's just a change in him in the sense that he knows what he wants and he's glad that he's found a way that he can express it. It's through the lyrics and then

¹⁹⁸ Please refer to Clip 12 - Equal on the SoundOUT Inclusive Music Bands DVD to hear the song 'Equal'.

getting to actually perform his songs and to be included in a band. This is just brilliant for him. (Angela McSweeney).

This sentiment is reflected in Cillian's song 'Locked In'. The lyrics describe his experience as a young man with profound cerebral palsy living in Cork city. Cillian revealed that the song provides reference to the use of DMIs to access music, which he believes is his way to 'life outside' – outside of Disability Services.

*I am locked, locked, locked,
into a daily life;
that I can't get out of,
I see a world outside
that I want to live in
but now I see a way out,
where I have a chance,
to live my life outside*

(Locked In, Cillian McSweeney).

Cillian continuously acclaims that 'with a bit of support and Soundbeam technology I can do this and I can let people know how I feel' (Cillian McSweeney). This is something that wasn't available to Cillian for many years.

Danielle, from Till 4, highlighted that the inclusive music band has provided a platform for her to express herself, to make new friends and to enable her to develop more confidence on a personal, social and musical level. She described being involved in the project as 'changing my life! It was the best thing ever invented.' (Danielle Kelly). Muireann the classroom teacher in SDC emphasised the importance of being involved in music as 'it's giving the students an opportunity to express themselves' (Muireann O'Shea).

Unlike the Circles band and Till 4, Mish Mash does not play covers of popular songs. All of the music emerges from the group's personal experiences.



Figure 51: Mish Mash member Kevin and Jonathan rapping

One of the Mish Mash pieces is called ‘Heartbeat’. The lyrics were written by Mish Mash band member Kevin, where his inspiration came from his experience of having a pacemaker implanted.

Grainne: what is the piece about?

Kevin: My Heart. My pacemaker. My heart.

Grainne: is it something that you wanted to share your experiences about?

Kevin: Ya it is really.

According to Kevin’s family he found it difficult to come to terms with some of his medical issues and often found it difficult to discuss. They were very surprised he wrote a song and were delighted he found a way to express his experiences. These are Kevin’s lyrics:

Heart Beat

This is my heartbeat

This is my source

It beats like a beat base,

It marks out my pace!

(Kevin English)

Aideen from Mish Mash highlighted that she felt having the opportunity for creative expression in a safe and fun environment is central to the band. She claimed that,

I just think it’s fantastic what is going on. It is such a great idea. You are

putting smiles on everyone's faces and giving them a chance to express themselves. I think that is so important. It's a fun atmosphere where everyone enjoys themselves (Aideen Carroll).

Aoife, also from Mish Mash, emphasised the importance of self-expression, particularly to express experiences as a person with disabilities. 'Some people have disabilities in Mish Mash. We try to express ourselves through music in different ways.' (Aoife O'Sullivan). This self-expression led to feelings of empowerment, which I discuss in the following paragraphs.

Empowerment

Empowerment refers to 'making (someone) stronger and more confident, especially in controlling their life and claiming their right' (Oxford Online Dictionary, 2015). The practice methodology of this study draws insight from Sen's Capabilities Approach, which aims to empower individuals to achieve what they value doing and being in life.

Cillian felt involvement in this project has had a profound effect on his life direction. He felt empowered and he emphasised that he wanted to empower others through his music.

Cillian described his involvement in Circles and how it has impacted him personally:

Music is the most important thing in my life to date. It has given me an outlet and opened up a new life for me. Before I wrote my first song, I didn't have much excitement in my life. I thought my life would be fairly

boring. It was only after I had written lyrics to a song that I discovered that I could put my feelings into words. This was only the beginning, I also took up lessons with Gráinne on how to use a Soundbeam, I felt this instrument was a great device, and it allowed me to be included in various music projects to date. I'm changing my life with music. (Cillian McSweeney).

When discussing previous perceptions and experiences of music, Cillian highlighted that he never thought he would be able to play music:

Grainne: Did you ever think you would be able to play music.

Cillian: shakes his head for no.

Angela, Cillian's mother, recalled the first time she saw Cillian perform: 'He wanted to surprise me and go "look what I can do" He was so proud' (Angela McSweeney). She particularly referred to Cillian's first performance with the Knocknaheeney Youth Music Initiative (KYMI) during the pilot phase of this study:

From the first day that I heard that song Equal in Blackpool library it was - that's it! He's there. That's his life. If you ask Cillian what he would want in life if he had any choice. He wants to make music. That's his thing now. (Angela McSweeney).

Empowering individuals to make their own choice about involvement and musical interactions is central to the ethos of all three inclusive bands. Involvement in all bands was on a voluntary basis and the DMIs empowered performers to choose when and how they contributed to the band activities. Cillian's mother Angela referred to this provision of choice as crucial for Cillian:

It was his choice to go there and do his own thing there. It was his choice and he loved the fact that he was making it. Cillian does so little in his day service, so his choices are so limited. Having a choice in doing something is so important for him (Angela McSweeney).

Angela also emphasised that involvement in the project has empowered and

motivated Cillian to continue with his literacy education. She stated that Cillian ‘wants to sort out his reading and literacy so he can put together his lyrics more independently. It’s motivation to keep him going’ (Angela McSweeney). She stated that:

This project has a huge positive effect on him. Coming here on Tuesdays and doing the gigs that come up now and again. They keep him going. He’ll tolerate other things because of this. He doesn’t mind going to his disability services tomorrow because of this today. If he hadn’t this today he’d be really pissed off tomorrow. He hasn’t had much to look forward to. But now he has because of this project. (Angela McSweeney)

Involvement in the Till 4 band also empowered members to think about new possibilities for their future. Till 4 band member Cian highlighted that ‘my dream now is to make a band. Be a professional drummer’ (Cian O’Sullivan). The inclusive and therapeutic experiences of making music in Till 4, empowered fellow band member Deana to reflect on her own experience of engaging with music and led her to consider a career path in music therapy:

I wanna go to college in Limerick to do Music Therapy. Ya. It’s just looking at people making music - it does help. It even helps me ya know like when I’m there and having a bad day I throw my earphones in and I’m up in my room blasting it out like and it clears my head half the time. (Deana Purcell)

Through the independent use of DMIs, the students with disabilities were empowered to choose when and how to contribute musically to the band. The freedom of choice, both to access the band and to engage in activities, was central to all bands. This was recognised as a positive aspect by all participants, their parents and the music facilitators, as often the provision of choice is something that is not readily available to individuals with disabilities. This lack of choice

resonated with some of the TMS students in in Till 4.¹⁹⁹ Stewart referred to the lack of his previous music education opportunities due to challenging economic circumstances. He was never given the choice to learn music before. He explained that ‘i’m finally learning how to play an instrument. Just I never had the money to go to classes. I never thought it would happen for me. So ya its really brilliant’ (Stewart Murphy). Being empowered to choose to learn music was recognised by many of the students within the inclusive band. ‘I’m so glad I got involved. Music is a big part of my life now. I think without it I’d be at home now bored. Probably in bed.’ (Deana Purcell).

The empowering effect of being involved in the inclusive bands was ubiquitous for some members. Mish Mash member Christine suggested that involvement in the band was the catalyst for her to become empowered to live independently in Cork city. She stated the,

I personally think that SoundOUT has made a huge difference in my life. For me it was the first push to get out and be independent from home as I had to travel [get a taxi] to get to it. It was a great confidence boost to be included in a band that uses inclusive technology and performing in front of a crowd, there is nothing like it. (Christine Haughey)

Riobard, another Mish Mash member, suggested that for him being involved in the inclusive band empowered him to strive to reach his potential. He stressed that ‘I work hard and try to reach my potential at all times’ (Riobard Lankford). This sentiment is reflected by fellow band member Kevin as he felt that involvement in SoundOUT enabled him to make a choice to set his own ‘goals’

¹⁹⁹ TMS is a school within an area of Cork city that is designated as educationally, socially and economically disadvantaged.

which he works towards and ‘practices every day. It is good. I like it a lot.’ (Kevin English).

Enhanced Confidence

I observed member’s confidence increasing as the bands progressed. This was particularly evident during performances, where a huge sense of pride emanated from performers. Cillian indicated that he has ‘gained so much confidence. I’m now performing and writing lyrics and I’m in a band. I feel very proud of myself’ (Cillian McSweeney).

Miriam Gallagher, the Person Centred Planner from Enable Ireland disability services, also observed an increase in member’s confidence, which she suggests is a result of being involved in the inclusive bands. She particularly referred to Cillian, as she suggested that ‘he became a lot more confident and he was able to perform and get up in public and do it’ (Miriam Gallagher). She also underlined the ‘knock on’ effect of the involvement of Cillian in Circles: ‘it is hugely beneficial for everybody in the centre’. Watching Cillian achieve his musical ambitions, gave many service users the confidence to try out music making. I witnessed an increase in numbers attending the music sessions I facilitate and many participants were enquiring about ‘joining a band like Cillian’ (Mary O’Sullivan). Pat Lombard is one service user that was hugely inspired and had written songs but never revealed them to anybody. He wrote a very profound and emotional song, which he chose to share with me after he saw Cillian perform at

his album launch. Subsequently I connected Pat with local rapper GMC²⁰⁰. They collaborated and recorded Pat's song.²⁰¹ Pat is still writing songs and attending the music sessions in Enable Ireland on a weekly basis. He also began a FETAC Level 3 Music Appreciation Award in January 2015.

Till 4 band members also revealed that being involved in the band has enhanced their confidence. Till 4 band member, Deana, stated that being involved in Till 4 has,

Given me a lot of confidence. I would barely talk, seriously like, in the class I would barely talk. Then I started here and I know there was people here that are on the same page as me, so like, I got a new lease of life. I found out I was good at it, like where before I didn't know whether I was good at singing or not. They can't shut me up in class now. It definitely brought up my confidence. (Deana Purcell).



Figure 52: Deana from Till 4 performing in Millennium Hall, City Hall.

Danielle, a Till 4 student from SDC, also declared an increase in confidence as a result of being involved in the inclusive music band:

²⁰⁰ GMC also worked as a facilitator at the Cork Academy of Music at that time, with local young people on a music production project.

²⁰¹ Please refer to Clip 13 Demons on the SoundOUT Inclusive Music Bands DVD.

At the start I was very shy but once I started this music thing I'm not as shy anymore. At the start I wouldn't do nothing. I wouldn't play piano for ya. Going to Terence mc Sweeney has improved my confidence because I like meeting new friends. Like Deana, I'm after getting very close her since starting this. I feel I have loads of confidence to talk to people now. (Danielle Kelly).

Aoife, a member of the Mish Mash band, suggested that performance played a large part in her developing confidence in her music making: 'I love performing. I have performed a few times. You get confidence on the stage. I get a small bit nervous but I love it.' (Aoife O'Sullivan). Riobard also reiterated this sentiment when he advocated for performance to be a focus for the band:

I like to be performing. I think when you are on the stage yourself. That when you are most kept going. You have to focus yourself and you have to have confidence in yourself. We work together. Its brilliant! (Riobard Lankford).

Happiness

Happiness is an emotion that the majority of research respondents referred to when discussing their involvement in each of the inclusive bands. Cillian particularly expressed his joy at performing. Angela, Cillian's mother, also supported this sentiment when she described Cillian's first performance on stage with Circles:

He came in right on time. He absolutely loved that. When we went to see him we were all in floods. He was so happy. I just remember his face on stage doing that. It's because he knew it was something that he could do (Angela McSweeney).

Cillian stated that the highlight to date was the 'launch of my CD and meeting The Coronas and the President' (Cillian McSweeney). Angela emphasised that as

a parent of a child with disabilities, the most important thing for her is Cillian's happiness.



Figure 53: Cillian at Circles rehearsals.

She states that 'when he's happy, we're happy. I know this project will keep him going!' (Angela McSweeney). She discussed the 'ups and downs' of having a child with profound physical disabilities and how involvement in Circles has provided a renewed sense of hope for her as a parent:

It just means so much to us. It's just so meant to be! It probably sounds stupid but we always knew he was special, but oh my God watching him play is just unbelievable. I don't think you'd have any idea of what it's like. We never knew because we knew Cillian had a disability and he was our first child and you think all your hopes and dreams go out the window, there goes college, there goes this, there goes that. But he has achieved so much! Really since 2010, since meeting you, he has achieved so much. He is so happy! (Angela McSweeney).

Enabling the music facilitators in all of the three bands to have fulfilling, enjoyable and rewarding experiences, was also a prominent aim for the practice in this study. Rory, the band facilitator in Till 4, emphasised his enjoyment of being involved in the Till 4 band:

I'm really enjoying the whole project because it's opened up like a new

area for me, which is brilliant, for my own personal development. You know I'm just learning so much. For me it's been brilliant!' (Rory McGovern).

The classroom teacher at SDC, Muireann, emphasised that for her, student's enjoyment in the band was vital. She stated that 'at the end of the day, whether they succeed in playing an instrument is not the important thing for me, it's that they tried and they enjoyed it, so that's paramount' (Muireann O'Shea). When discussing the experiences of being involved in Till 4, all members emphasised the enjoyment element of the practice. Shauni, Till 4 band member from SDC, affirmed that she 'actually enjoyed every bit of it. I enjoyed every bit of it. I absolutely loved it. I loved it ya. I loved it.' (Shauni Breen). She said 'music is definitely my favourite subject. That's what I love. I love music. I dunno what it is. I just love Magic Flute and the songs' (Shauni Breen).

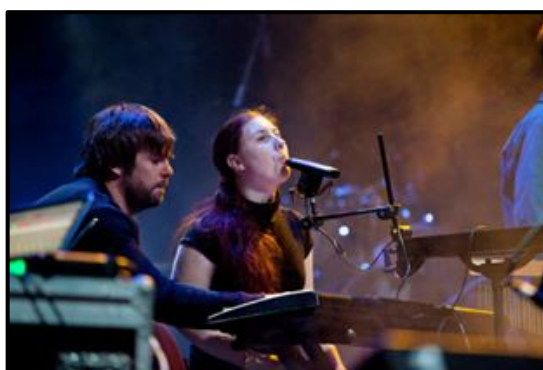


Figure 54: Shauni from Till 4 playing the Magic Flute accompanied by Graham from Circles

All students involved in the Till 4 band reflected this sentiment. Cian from SDC said that 'being involved in the band makes me very happy. Every Wednesday I look forward to going up there.' (Cian O'Sullivan). Josh from TMS advocated for more music time. 'I wish we had more time in music class' (Josh Crean). For

John from SDC, it breaks the habit of weekly activities and ‘it gets you to do something different. Have a look what is around. Sure everyone is happy when we are playing together’ (John O’Shea).

Research participants in this study articulated their feelings of happiness, enhanced confidence and empowerment. They also detailed their experiences of identity development and self-expression passionately. In the next and final Chapter 10, I consider the findings relating to the band member’s experiences of social inclusion and their undertakings of advocacy, for further progressive and sustainable inclusive music making and learning opportunities in Cork city.

Chapter Ten

Findings: Social Inclusion, Advocacy, Progression and Sustainability

In this chapter, I present findings that relate to the experiences of social inclusion in each of the three inclusive bands. I follow this with a discussion of wide ranging advocacy efforts by research participants, for more inclusive music practice in Cork city. In the latter sections of this chapter, I also discuss the emergent issues of progression and sustainability in relation to the inclusive practice in this study. Reflecting on the literature and findings discussed, I conclude this chapter by sharing some implications of this research and it's potential to inspire further investigations in this area.

5. Social Inclusion and Advocacy

All research respondents in this study highlighted the importance of the social aspects of the inclusive music bands. Also many participants emphasised the need for further advocacy for inclusive music making and learning in Cork city and beyond. The thoughts of research respondents on these issues are shared and discussed in the paragraphs that follow.

Social Inclusion

Recent developments in Cork city, including the establishment of the Cork Music Education Partnership (CMEP), along with numerous reports, including Cork City Council's report 'Music as a Tool for Social Inclusion' (Minguella, 2009), have provided a platform that normalised a social inclusion agenda within music education practice across Cork city. These developments have served as a

foundation for the emergence of the inclusive practice in this study.

When discussing the issue of social inclusion in relation to the Circles band, Angela, Cillian's mother, pointed out that the social activities outside of the band rehearsals and performances were just as important as the musical interactions. She emphasised that Cillian 'wants to be with his own age. Because of the music he has something in common with them. The social events that he looks forward to now are gigs or going to a concert because that's his life now' (Angela McSweeney).²⁰² Cillian stressed that particularly the social dimension of being involved in Circles has made him feel included equally. He described that 'I have made lots of new friends since I joined this project and I feel I have been included as an equal amongst the other musicians. It's brilliant' (Cillian McSweeney).

Effective communication strategies that supported social inclusion amongst the band members evolved gradually as the project progressed. As described in Chapter 8, initially, some of the band members without disabilities were insecure about communicating with Cillian as he was non-verbal. Dave, a Circles band member, recalled that he felt unsure how to communicate with Cillian when he first arrived:

I just didn't know how to talk to him. Am I supposed to talk to him like normally, like I talk to one of my friends or am I to talk more slowly. When I saw you [Gráinne] talking to him I was able to see that actually I could treat him just like anybody else and that put me at ease. (Dave Barrett)

²⁰² Since this interview Cillian has undertaken an audit of venues that are accessible for wheelchair users with his new PA Eric. He regularly attends gigs in venues that are accessible with Eric.

Cillian's mother, Angela, believes that meeting up with the Circles members on a weekly basis over a sustained period of time was essential for them to develop the appropriate communication skills to engage meaningfully with each other. She described what it meant to her, as a parent, seeing her son socially engaging with young people his own age:

It takes a while for the lads to become comfortable with each other but now they just come over to him and have a normal conversation. I mean, Jesus, nothing else matters now only this. And just watching him with other people is amazing! (Angela McSweeney)

Miriam, Cillian's person centred planner from Enable Ireland disability services, stressed the importance of the DMIs as a way for people with profound physical disabilities to be included in music, beyond the disability services. Many members of the three inclusive bands also accessed services at Enable Ireland disability services. Miriam, a representative of Enable Ireland disability services described the use of DMIs in the three inclusive bands in this study as,

Outstanding for our service users. It had included people that would have never been involved in something like this. The technology is brilliant to include people who have always been at the edge. People like Cillian. It is hugely important work! (Miriam Gallagher)

As music activities in Enable Ireland disability services were segregated from community settings during this research period, Miriam suggested that 'going forward everything should involve other community groups not just disability organisations' (Miriam Gallagher).²⁰³

²⁰³ Since this interview many service users from Enable Ireland are connecting with community arts projects outside of the day service centre.

Audience members commented on the socially inclusive atmosphere that was created at each Circles performance. One audience member related her experience of a Circle event and described her subsequent evolved perception of the ‘capabilities’ of people with disabilities as musicians. She stated that she was,

Really taken with the interaction between Cillian and the other musicians. You had to have been there to experience. It was so much more important than seeing it on a DVD. I never met someone like Cillian before so my expectations were low. It was a lovely interaction between the guys. They all linked in together. They were able to look at Cillian and know what he wanted. So it was about them as well. It was that sense of belonging. He belonged to that group. He was just as much a member of that group as the others and he contributed equally. I never thought that was possible really. (Audience member)

Dave, a band member from Circles, also reflected on the issue of social inclusion in relation to the Circles band. He felt that,

The whole thing is like inclusive. It’s the social thing. Cillian is getting two things. We’re all getting two things, writing songs collaboratively and it’s a good social experience as well. Cillian is very much part of it all. (Dave Barrett).

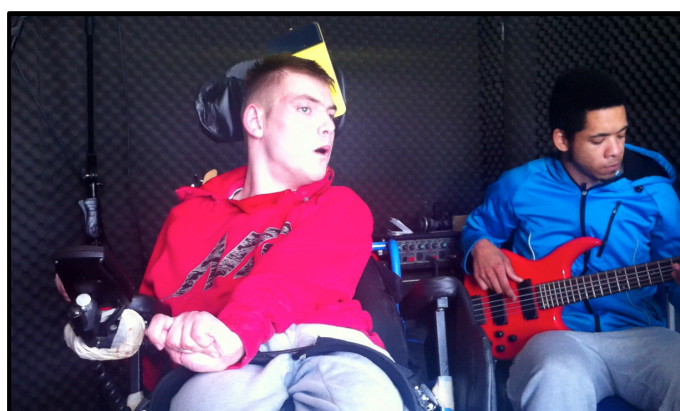


Figure 55: Cillian and Victor from Circles at rehearsals at the TMP.

When discussing the issue of social inclusion, in relation to the Till 4 band, Muireann, the classroom teacher at SDC, stated that social inclusion was a

priority for the school over musical development: ‘Social inclusion has been of paramount importance to us’ (Muireann O’Shea). The Till 4 facilitators noticed that there were fewer opportunities for social interaction in Till 4 than there were in Circles or Mish Mash. To accommodate the needs of the school’s timetable and travel times, Till 4 was more structured compared to the other bands, resulting in less time for socialising between the students. Till 4 came together for one hour every Wednesday, whereas the Circles and Mish Mash bands met up for up to two hours. Mish Mash and Circles rehearsals also included a break, which facilitated social interaction. However, when describing their experiences in the Till 4 band, most band members emphasised the positive impact of making new friends from different schools. Reflecting on his experience in the band, John from SDC proposed that it was a great opportunity for the students at TMS and SDC to work with each other. He stated that,

It was all very good and good fun. I loved meeting different people. It’s good to get us all involved. It shows them different stuff that they never seen before [like the Soundbeam]. It’s good for Terence MacSwiney cause they get to know other people. They get to meet people who can do things. (John O’Shea).

Muireann from SDC, stressed that the students from her school felt welcomed in TMS by both the facilitators and especially by the students. She exclaimed that,

Our kids are very lucky to have an exposure to that experience, because they don’t always get that. And they have been treated with compassion and with respect and if nothing else were to happen to them this year, they have had that fabulous social and musical experience. (Muireann O’Shea).

Danielle, a Till 4 band member from SDC, pointed out that she, ‘adored up in Terence MacSwiney, with all the friends like. Ya I adored it. It’s brilliant when you get to meet new people up there’ (Danielle Kelly). Patricia, the principal from SDC, also

underlined the importance of the social aspects of Till 4, pointing out that ‘they have loved being part of a mainstream school performance. They have really valued it. It’s just more friends. More friends, and that’s how they see it (Patricia Harrington). Shauni, from SDC, reflected this by claiming that ‘I liked it all. I liked meeting all my friends.’ (Shauni Breen). Cian, also from SDC, also revealed ‘it’s been brilliant going up to Terence MacSwiney. Meeting new people.’ (Cian O’Sullivan).



Figure 56: Cian from SDC and Darren from TMS, performing with Till 4

The TMS students who participated in Till 4 also regarded the social aspect of the band as beneficial for all members. Josh from TMS pronounced that being involved in Till 4 ‘has opened up new friends to me from both schools’ (Josh Crean). Deana also from TMS, highlighted that the project has been ‘brilliant. I think its fabulous that they [students from SDC] are here and that this is happening.’ (Deana Purcell). She recalled that she found it difficult at the beginning because she was ‘never around people with disabilities before. But after getting to know them they are actually lovely. I actually love them being here. We have a good laugh with them.’ (Deana Purcell). Darren, from TMS,

also argued that the involvement of the students from SDC ‘make it [making music in the band] happier’ (Darren O’Leary). He underlined how the SoundOUT music project has had an impact throughout the school since the development of Till 4:

Without music, school is actually really bad. There was no music before. Everyone now is on about our band cause like its more music in the school and everyone is happier. They are delighted that the music is here. All the teachers love it too. Mr Curran said he would love to come down and play some Wednesday. (Darren O’Leary).

Muireann, the classroom teacher at SDC, stressed that she felt her student’s involvement in Till 4, was socially inclusive without being tokenistic. She emphasised that all members contributed to the project in different, unique and important ways:

I think it’s great for them and then they really feel as if they are participating and they are bringing something to the band. They are not just the token disabled person, they really genuinely feel that they are partaking in the experience. And I think that’s why I’m so pleased with Knocknaheeny. Knocknaheeny has shown what can work, what can happen, what you can achieve. (Muireann O’Shea)

Jessica, the Till 4 band facilitator emphasised the importance of balancing a social priority with a musical one within inclusive music practice. She suggested that Till 4,

Feels like a real community when that social stuff happens, I think, because there’re real bonds going on. I get this feeling that this is very important work and it’s not just the sounds we’re producing. When there’re different layers it makes the music more rich. (Jessica Cawley).

This balance of musical outcomes and aims for social inclusion was also present in Mish Mash. Christine, a band member in Mish Mash, described her social

experiences of being involved in band as,

Great to make new friends to have a band to play with every week and of course the times where we went to the pub are among my favourite. I really felt part of a team and a real musician in the band. (Christine Haughey)

Karl, also a member of Mish Mash, refers to the social inclusion elements embedded in the band. He described how he feels this socially inclusive approach helps with the creation of new music in the band:

We kind of match up with each other. We make friends. We learn from each other and share what we want to do. We work together as a group to work on the piece together. Its better creating new pieces with people rather than on my own. (Karl Murphy).

A strong sense of social inclusion and togetherness radiated from all the band members when describing their involvement in the Mish Mash band. Riobard, a band member from Mish Mash, described it as ‘we play in a band. We listen to each other. We are all taking part in a team’ (Riobard Lankford). When asked, ‘What does it mean to him to be part of Mish Mash?’ he claimed that ‘music is my home. It’s like family’ (Riobard Lankford). Aoife, also from Mish Mash, felt that she was socially included through music beyond the weekly rehearsals and performances. She suggested that the skills she developed with Mish Mash, on the Roland Wx5 wind synth, enable her to play music with her family for the first time:

My brother is actually a bit of a legend. He plays rhythm guitar and electric guitar. He’s a guitarist. I write lots of raps and songs in Mish Mash and I also play the keyboard and the wind synth. He was playing the guitar and I did a bit of keyboard and wind synth. We played together. I never did that before. It was really nice. I love playing with him now. (Aoife O’Sullivan)

Jenny, another Mish Mash band member, suggested that for her, being involved

in the band is largely about having the opportunity to actively participate in a group. Through the use of DMIs she is able to join in, rather than just listen, which is a common occurrence for Jenny in other activities:

Grainne: You didn't have a chance to make music before Mish Mash?

Denise: She can go along to concert and go along and listen but then can't actually participate.

Grainne: OK

Jenny: Points to don't like

Denise: She doesn't like not being able to participate.

Grainne: Well I'm delighted you are participating in Mish Mash!

The wide-ranging social and personal outcomes for inclusive band members are evident through the findings in this study. Participants recognised these developments throughout this research period and many engaged in advocacy efforts to sustain this inclusive music practice, beyond the research period. These efforts are described below.

Advocacy

The use of music for advocacy purposes was a strong theme that emerged during this study. People with disabilities often experience segregation and powerlessness in relation to decision making that affect their lives. This was an experience that some of the research respondents in this study discussed, in relation to having the opportunity to actively engage in the arts in an inclusive environment. Advocacy is concerned with getting one's,

Needs, wants, opinions, and hopes taken seriously and acted upon. It allows people to participate more fully in society by expressing their own viewpoints, by participating in management and decision-making, and by availing of the rights to which they are entitled. (National Disability Authority, 2015)

The three inclusive music bands incorporated an advocacy agenda that aimed to influence educational and social change, from a micro to a macro level. The creation of partnerships, on a local, national and international level, as described in Chapter 8, provided opportunities to advocate for inclusive music practice and development, in a variety of contexts.

Advocacy through music was particularly important for Cillian from Circles. For example he promoted inclusive music practice in his local area through performances in local schools and disability services. He also undertook national PR activities in collaboration with Enable Ireland National Assistive technology Unit in order to increase awareness of the music ‘capabilities’ afforded by the use of DMIs. On an international level he published his approach to music making, which in 2013 resulted in him becoming the runner up in the international Soundbeam competition, which was adjudicated by Led Zeppelin’s John Paul Jones.

The lyrics in Cillian’s songs advocated for the ideologies such as inclusion and social justice, to become more commonplace within society. Through writing lyrics, engaging in regular performances and presentations with a wide variety of partners, Cillian aimed to influence and inspire policy and technological development, which would directly impact resources and support for his inclusive practice and those of his peers. ‘I wanna give the world somebody to think about’ (Cillian McSweeney). This line, from Cillian’s song ‘Locked In’, refers to his aim to inspire and encourage young people, through performance to fulfil their ‘capabilities’.

He suggested that his involvement in Circles enabled him to advocate for

music as a tool for inclusion and self-expression for people who are marginalized. He described that his advocacy efforts included him having ‘a huge involvement with SoundOUT both as a performer in Circles and as a student’ (Cillian McSweeney). He emphasised the importance of,

Showing others how someone with a disability can play an instrument alongside other band members. And to show others that music is a way of expressing yourself through either writing lyrics and performing and playing an instrument. (Cillian McSweeney)

Angela, his mother, concurred by suggesting that Cillian’s motivation to be involved in Circles, was not only for musical development but also for advocacy purposes:

He wants to be an inspiration for somebody else [young person with disabilities] down the line. He wants to show them that there’s a life there, there’s something else to look forward to because in his words, when he was down there [in school] he had nothing, he didn’t think there was something like this he could look forward to but because he’s found music now he has a life whereas if he hadn’t found music, in his mind, he wouldn’t have had much of a life. He wants to show them, this is what you can do too. He wants to be an inspiration for other people like him. (Angela McSweeney).

Cillian is certainly an inspiration at Enable Ireland disability services as frequent requests came to me from other individuals to engage in music following Cillian’s album launch. Mary-Ellen O’Sullivan asked directly after Cillian’s album launch:

I would like to do what Cillian did. Record on my own. But I would need help doing it. It would be very hard to do it myself, but I would need help to actually record it. Will you help me like you helped Cillian? My dream is to become a pop star like Cillian. (Mary Ellen O’Sullivan)

After this request we looked at various acoustic instruments and DMIs that would be accessible for Mary-Ellen. Subsequently she started to learn the Magic Flute. During a follow up conversation with Mary, she described how she played the DMI:

With the Magic Flute you don't have to use your hands, you just can use your mouth because there's a little mouthpiece thing. My hands are not really great at doing things, so for the Magic Flute I use my mouth to move it up and down, up and down, to find the notes on it. I'm still trying to do the joy (Ode to Joy) song. It's quite hard but I'll get use to it after a while. You have to see if you can get the right notes for it. I absolutely love it. I love the way it sounds. The sounds are good. Music is so important to me now. (Mary Ellen O'Sullivan)



Figure 57: SoundOUT student Mary Ellen playing Magic Flute

Miriam, Cillian's Person-centered planner at Enable Ireland disability services, described that involvement in Circles 'brought out parts of Cillian that we hadn't been aware of before, which is great. It is really positive' (Miriam Gallagher). Resonating with Mary Ellen's experience, she also emphasised that Cillian's involvement in Circles has also been very positive for everyone at Enable Ireland disability services:

It's had a hugely positive impact on the centre really. I don't think the service users have ever seen each other get involved in bigger stuff outside of here. Seeing people achieving those kinds of things is really positive for everyone because it gives them a different perspective. It's not right to just sit there and do nothing. They are getting the opportunity to get involved and be recognised as a person, rather than just a person with a disability. (Miriam Gallagher).

Cillian challenged attitudes on a regular basis particularly ones relating to the perceptions of the musical 'capabilities' of people with disabilities. John, a Till 4 band member from SDC, commented that when he saw Cillian perform at a school concert:

I was surprised. The way he was able to use the head switches and stuff. He Cillian was very good. We should be involved in stuff like that. Everyone should be involved. I would love to be involved in something like that after school. There should be no labels. (John O'Shea)

Shauni, another member of the Till 4 band, stressed her surprise when she saw Cillian perform his own music with Circles:

I wasn't really expecting Cillian McSweeney to play. I was surprised. I didn't know that he had a band. I didn't know that. He was just very good. I wasn't expecting Cillian to do a band now like. I know it's hard for Cillian cause he can't talk. It's hard for him. But he was brilliant like. (Shauni Breen)

Cian, from SDC, also described a Circles performance as 'Brilliant!' (Cian O'Sullivan). He continued to share he was initially shocked when he saw Cillian perform with Circles. He stated that 'I know Cillian a very long time and I thought he played the Soundbeam alone and I thought everyone in the band would play the Soundbeam. When they started playing I was like whoa! They were really brilliant' (Cian O'Sullivan).

Cillian not only inspired the students with disabilities at SDC, he also has inspired the other band members in Circles and audience members at Circles performances.



Figure 58: Circles performing at School of the Divine Child

An audience member from a Circles performance suggested that such events helps to ‘change attitudes towards the disabled. What struck me is his self-confidence. Cillian playing instruments like that. wow!’(Audience Member). One particular member recounted that she was shocked at her preconception of the musical ‘capabilities’ of people with disabilities and how Cillian challenged them through his performance:

Everybody was amazed at it. It was a very positive thing. You couldn’t help being affected by it. I was shocked by my own response because I did have very poor expectation of him. When he came in I thought ‘ god this is going to be embarrassing for him’. I felt that he was on show and that it was going to be embarrassing. I didn’t think he was going to do anything of any value. Then I became completely embarrassed at my own lack of expectation. I felt totally just’ (Audience Member).

Another audience member also reiterated that their perceptions were challenged after attending a Circles performance. She referred to the transformative effect

music making had on Cillian when he performed with Circles:

I couldn't understand how Cillian or anyone with a physical disability would be able to play - could make productive music. When he [Cillian] came initially, he was sitting in his chair, not reacting to what was going on around him. His movements weren't purposeful. But as soon as an instrument was put in front of him the control he had of it. It shocked me! He was able to control it. The different person he became when the instrument was put in front of him. It changed your perception of him. You see him as an artist.' (Audience Member).

When discussing the role of DMIs in inclusive music practice, some audience members from Circles performances, recognized the significance of the Soundbeam: 'It's his voice. It's his expression. It levels the playing field. It's like giving a paintbrush to an artist or like giving a pen to a writer.' (Audience Member). Edel Sullivan, a lecturer in community music and music therapy at the CIT CSM and regular supporter of SoundOUT activities, emphasised her support of embedding advocacy into the ethos of inclusive music bands. 'I think if you get out there and advocate it, people will see it and respect it.' (Edel Sullivan).

Angela highlighted that Cillian also challenged their attitudes and perceptions, as parents towards him:

Cillian being involved in this project has taught us a lot as well, because we took a lot for granted with him. Maybe because it is easier to not go down that road with him, because it could break your heart when things fall through. We didn't know he could do all that. We didn't ever think any of this could be a possibility because of the physical disability he has. He wants to give something back, all the time, he wants to give back something. (Angela McSweeney)

When asked, what are your ambitions for the future? Cillian emphasised that 'I

want to be an inspiration to other disabled people and to show them what you can achieve, if you work hard and believe in yourself” (Cillian McSweeney). Cillian inspired cultural and social change in the realm of music education in Cork city and is continuously advocating for a more inclusive model of music education and society in general. He describes his ambition for the removal of barriers to music making and performance in Cork city through song lyrics:

Unlock these doors
Smash down these walls
Break down these fences
And let me be free
(Locked In, Cillian McSweeney).

Circles has become a symbol of inclusivity and the promise of future possibilities for people with disabilities in music education. The prominence of the three inclusive music bands in Cork and the subsequent respect for the quality of music created is recognized as giving ‘people a little bit of promise’ (Miriam Gallagher).

Advocacy also featured strongly in Till 4 practices and performances. The partnership approach in the Till 4 yielded opportunities to share and advocate for inclusive music approaches in formal education settings, for instance in SDC and in TMS. This led to staff and students from these educational settings engaging with inclusive practice that was not present previously, thus enhancing awareness of this model of music making and learning. The national network afforded by the Music Generation initiative, particularly supported the advocacy efforts for inclusive music practice in Till 4. I became an inclusive music consultant for the Music Generation programme in PortLaoise and advised Mayo Music Education

Partnership (MEP) on the use of DMIs for inclusive music practice within their instrumental tuition programme in schools. This consultancy led to music organisations increasing inclusive music practice, which incorporates the use of DMIs, throughout the country.

Margaret, the co-ordinator from Music Generation Cork City (MGCC) emphasised the importance of inclusive programmes, such SoundOUT, to highlight the potential of an inclusive approach to music education. She described the impact of SoundOUT as,

Huge. I would say there's lots of different ways in which it's impacting. It's levelling the playing fields in that space of learning music. I think it's hugely challenging in a good way for people to see that happening and to actually have to re-think how they see, children and young people, or people with disabilities, and what their capacities are or what their potential might be. I think that's radical. I think it will have a profound long-term effect. It's such early days though. But I think even in the year and a half, there's been a huge shift in thinking about music. How music education can work. (Margaret O'Sullivan).

Margaret also referenced the importance of embedding performance activities for advocacy purposes in the SoundOUT inclusive music programmes to increase support for inclusive music practice and initiate educational change:

Having an event like in the Opera House where you have that quality of interaction and performance and the confidence and the stage presence and the creativity and all of that. That's huge. That makes a bigger case for an inclusive approach than any amount of reports or campaigns or whatever. Or at least wrapped up in all of that. I think that will all change attitudes. (Margaret O'Sullivan)

This was evident from the first SoundOUT performance, where the Bank of America cited the inclusive music education practice of SoundOUT, which was

demonstrated through performances and discussions, as an inspiration for donating one million dollars to Music Generation's national fund. Margaret highlighted that 'its changing attitudes for everyone' (Margaret O'Sullivan).

Throughout this study I observed the lack of representation and discourse, relating to the development of more inclusive music education strategies and systems, at local national and international music education conferences. Discussions about inclusion should be embedded in the wider discourse of music education development, rather than segregated, as it currently stands. Margaret, as coordinator of MGCC, agrees with this ambition:

I think discussing music and disability should be a general concern, rather than for example a whole seminar on music for children with disabilities, which is great but it doesn't advance the conversation of inclusion. There is probably something we could be doing on that. We probably should. (Margaret O'Sullivan).

Margaret also suggested that there are still many 'attitudinal barriers even within the community of practice that is Music Generation' and she feels there is still a lot of advocacy needed in this area:

I'd love to see inclusivity being part of the change in music education landscape on a national level but I don't know if I'm seeing it at this moment. That's probably a long way down the road. I don't know. I don't mean to be pessimistic. (Margaret O'Sullivan).

My active membership with the Society of Music Education in Ireland (SMEI) and with the International Society of Music Education (ISME) Special Music Education and Music Therapy commission, enabled me to share the practice from each of the three inclusive bands, on a national and international level

through conference presentations and research publications, aiming to bring the issues of inclusive music into the broader music education discourse.

In the Mish Mash band, advocacy wasn't as strong a priority, as it was in Circles and Till 4. However, it was acknowledged as an outcome of performances. Similar to Cillian from Circles, Jenny suggested that Mish Mash has the potential to advocate for people with disabilities having access to music making and learning:

- Grainne:** Anything else you would like to say about the group?
- Jenny:** Points to adults and can and play and write
- Denise:** Do you mean adults with disabilities?
- Grainne:** Are you trying to say that Mish Mash shows that adults with disabilities can make music?
- Jenny:** Jenny nods.
- Denise:** Is it that is what Mish Mash stands for?
- Jenny:** Nods.
- Denise:** It gives people with disabilities a voice and a chance to make music.
- Jenny:** Nods yes

Karl, a band member in Mish Mash, also emphasised that performances had the potential to highlight the musical 'capabilities' of people with disabilities. He stated that 'people will listen to what is being said and being done and will learn from it.' (Karl Murphy). Aideen, from Mish Mash, stressed that SoundOUT stretched beyond just facilitating music making and learning. 'It's about freedom' (Aideen Carroll). She emphasised that 'voices need to be heard. This work needs to be shouted out loud' (Aideen Carroll). The partnership between Mish Mash and the Arts and Disability Network, led to Mish Mash

performances with international inclusive bands such as the Fish Police,²⁰⁴ and the creative collaboration with UK disabled artist Simon McKeown²⁰⁵. The later collaboration focused on advocating for the rights of people with disabilities to engage in the creative arts culminating with a large-scale multi-media performance called Cork IGNITE in Cork city, as part of Culture Night, September 2015.²⁰⁶

Results from these advocacy efforts included enhanced awareness of both the benefits and challenges of inclusive music practice. Also new DMIs were developed for independent and creative music making, as a direct response to advocacy efforts in this study. These developments increased the number of individuals with disabilities becoming engaged in the creative arts throughout the city and beyond.

6. Progression and Sustainability

In this final section, I discuss the experiences relating to progression in terms of individual's following their unique 'line of flight' within and from the inclusive bands. I conclude this section with a discussion on the issue of sustainability in relation to the inclusive practice that was developed as part of this study.

Progression

Progression in music making and learning was linked to meaningful engagement for members in all three bands, but particularly in Circles. As described in

²⁰⁴ The Fish Police are an inclusive music band who members are part of the Heart n Soul advocacy organisation in the UK. <https://fishpolice.bandcamp.com/music>.

²⁰⁵ Simon McKeown is a digital artist with disabilities in the UK.

²⁰⁶ For more information please refer to www.corkignite.com

Chapter 8, the partnership developed in each band supported various ‘lines of flight’ for each member, resulting in multiple and diverse progression routes, both within and from the inclusive bands. In Circles, Cillian focused his ‘line of flight’, towards learning more about composition, music theory and technology so he could contribute more independently to the group. He specifically mentions that he would like to gain an accreditation in music. This was also on his initial list of musical ambitions, which he gave to me prior to the pilot study. Cillian stated that,

I would love to progress to a full time course in music and technology. One that would include, writing lyrics and composing music and performing at different levels, so that a certificate can be achieved at the end of the course. (Cillian McSweeney)

In September 2014 Cillian began FETAC Level 5 Music Theory module at City North College in Cork city. This course was collaboratively adapted to be universally accessible by SoundOUT, City North College and Enable Ireland disability services and was funded by the Cork Education and Training Board. The course involved individuals with diverse abilities, from a range of backgrounds. All of the course material was accessible through a range of augmented and alternative communication systems and devices²⁰⁷. Cillian completed the practical elements of the course using DMIs. Angela, Cillian’s mother, emphasised that ‘once Cillian has something to work on he’s happy, that things are progressing’ (Angela McSweeney). Unfortunately Cillian faced and continues to overcome many barriers to following his ‘line of flight’, which is

²⁰⁷ Some students used Grid software (communication software) on their communication devices, including MyTobi and iPads. Cillian used eye gaze technology to do powerpoint presentations and engage in class discussions.

discussed in more detail in the ‘barriers to progression’ part of this section.

The provision of diverse progression routes or ‘lines of flight’ for Till 4 band members was also a priority. MGCC’s coordinator, Margaret O’Sullivan, highlighted that a core aim of the MGCC programme was to support young people to find their relevant musical path, through the ‘many potential progression routes within and from this programme’ (Margaret O’Sullivan). The student’s classroom teachers, band facilitators and school principals, involved in Till 4, discussed this issue of progression from the initial planning stages of the project. Patricia, the SDC principal, stated that since involvement in the Till 4 band, she has begun working towards their ‘next step to make it so that every child in the school can have access to music.’ (Patricia Harrington). She emphasised that student’s involvement in the Till 4 band, has supported existing music education activities in the school and has ultimately created a more rounded music education experience for them:

It has been brilliant, because it has taken our children to a different musical dimension, right. Now our children have got a very good rounded and progressive music education in the last couple of years. (Patricia Harrington)

John, a Till 4 band member from SDC, described his experience of musical progression when playing the iPad during the weekly Till 4 rehearsals:

I play the piano on the iPad. I really enjoy doing that. You go into Garageband, then into instruments, and then use your fingers and play the notes you want. There are different notes for different songs. I have to learn the different notes with colours. I really enjoy it. It was difficult at start but once I got to practice I was fine. I knew what to do then. I am getting good at it. I learn new notes every week. (John O’Shea)

When discussing this issue of musical progression with Stewart, a band member

from Till 4, he emphasised that it was very apparent for all members in the band. He opined that this progression is a result of Till 4 band facilitators being ‘good teachers, so you learn very fast’ (Stewart Murphy). Progression beyond Till 4, was also discussed with some members from Till 4. Deana, a Till 4 band member from TMS, suggested that she would like to study music at third level, once she finished secondary school:

Since I joined here, it’s been brilliant and I’m learning loads. I have a career in mind for after school now. Music therapy. (Deana Purcell).

Jessica, the Till 4 band facilitator, stated that Till 4 is ‘not only inclusive it is progressive’. (Jessica Cawley). She highlighted that Till 4 was a band that people in the SoundOUT programme both progress to and from. Margaret from MGCC perceived the quality of progression within and beyond Till 4 emerged from,

The musicians involved. Your [Gráinne]vision has a huge part to play. The knowledge and the constant learning and the constant striving to keep bringing in new technologies and new techniques and not accepting less. I think that has a huge impact that you really couldn’t pay for that. (Margaret O’Sullivan).

In the Mish Mash band, members viewed involvement in the band as a progression from large group music activities they were previously involved in.²⁰⁸ All members expressed an ambition to progress further, both within and from Mish Mash. Jenny, a band member in Mish Mash, viewed Cillian McSweeney from Circles, as an inspiration for progression. She requested to become involved in a community-based band similar to Circles, as a progression

²⁰⁸ Many Mish Mash members joined the band after being involved in large group music projects I facilitated at local DS. Half of the members were also previous participants on projects I led with Cork Music Works (CMW).

from Mish Mash. Christine also from Mish Mash declared that she felt she progressed using Soundbeam since her initial class: ‘At first learning how to play the Soundbeam was a challenge, but I overcame it. I’m really good now’ (Christine Haughey). She also emphasized that her goal to continue making music, even beyond the Mish Mash Band: ‘I will definitely stick with my music, get in to new bands and try out new instruments.’ (Christine Haughey). Some other members have identified progression routes beyond musical ones. Riobard from Mish Mash stated that his ‘dream is to be a volunteer with SoundOUT. I’ve been here for 10 years²⁰⁹ and I’d like the next step to be a volunteer’ (Riobard Lankford). Karl also a Mish Mash member implied that he would like to expand his role in the band to gain more experience as a workshop assistant or leader. He also suggested that it would be good to bring this approach to making music to local primary and secondary schools to increase awareness of inclusive music practice. UCC School of Music and Theatre student and Mish Mash member Aideen, identified that she would like to continue her education into the area of music therapy at the University of Edinburgh. She felt her experience of making music with the Mish Mash band, particularly using DMIs for inclusive music making, would be beneficial to her position as a music therapist in the future.

The provision of ‘lines of flight’ for all abilities within an open and inclusive music system is necessary to prevent further exclusion of young people with disabilities from active music making and learning in Ireland. Unfortunately many barriers to progression still exist. The perceived barriers to

²⁰⁹ Riobard views SoundOUT as an extension of CMW, as I worked with him through my role as project co-ordinator at CMW.

inclusive music practice in this study are discussed below.

Barriers to Progression.

In this section I describe the research respondent's experiences of physical and attitudinal barriers to music progression within and from each of the three bands.

In Circles, Cillian encountered and overcame a wide range of barriers when engaging in music learning and performance activities. According to Angela, Cillian's mother, progression into mainstream services was always a challenge for Cillian. She stressed that he would love to be in mainstream settings because 'he doesn't feel disabled when he is in mainstream groups, like in the Circles band'. (Angela McSweeney). However she emphasised that there are many barriers to such inclusion and progression for him. She particularly referenced the challenge of just having one morning per week in an inclusive setting:

It's just that in his head he doesn't have a disability. He knows he has to learn, and he really wants to learn. But he knows he's so limited because it's only one day a week with Circles and no where else is open to him at the moment so he has to go back to Enable Ireland and that is like going into another world. So it's just going from one extreme to another. (Angela McSweeney)

Angela also described Cillian's frustrations at the lack of opportunities available for him to follow his 'line of flight' and his dependency on his Disability Services:

Like I don't know how he gets out of bed some mornings because if, for instance, his chair isn't working [his power chair] and he's in a manual chair he's just left there looking into a corner. Cillian wants to learn more outside of disability services and beyond Circles but we can't find course that can accommodate his needs. It doesn't seem possible beyond SoundOUT. (Angela McSweeney)

Cillian suggests that this dependency is a result of him having ‘not had a lot of support from the government such as personal assistant (PA) support and funding for music technology or projects that I am involved in’ (Cillian McSweeney). Finding a progression route from disability services into a mainstream music education environment for Cillian, with appropriate supports and resources, has been ‘very hard. He wants to learn more but it’s been very hard to find the right course and support.’ (Angela McSweeney). Angela questioned that, ‘could he just sit in with people in a mainstream local music school and just ‘tip away’ at music and be accepted? It doesn’t seem to be possible apart from this project’ (Angela McSweeney). In response to Cillian’s frustration SoundOUT established, in collaboration with a range of educational and disability institutions, a FETAC Level 5 music theory module to act as a possible stepping-stone for Cillian to access mainstream services. Cillian is due to finish this course in December 2015.

The phenomenal support from Cillian’s parents, has helping him overcome many barriers to progression to date. Angela, his mother, felt it was their job: ‘We feel if we don’t support Cillian and fight for him, then he’s not going to get anything’ (Angela McSweeney). One such barrier was the lack of necessary PA support for Cillian to participate in Circles. Both Cillian’s parents were not in employment so they acted as his PA and were available to bring him to the project every week, as well as to performances and various events throughout the year. They are wholly dedicated to his well-being, which included advocating for more inclusive practices in Cork city and seeking out new and more accessible technologies for the project. If Cillian’s parents were in full time employment he

may not be able to access projects such as Circles or other further education courses, as a result of such limited support services.²¹⁰ This situation is so fragile and threatens Cillian's involvement in Circles and other inclusive activities.

The cost of DMIs and assistive communication devices was also acknowledged as a significant barrier for Cillian to access meaningful and progressive music education opportunities. As a result of financial constraints, he did not have the appropriate software (Digit-Eyes developed in 2015) and computer system (MyTobi) he needed to communicate and compose music effectively until the later stages of this study.²¹¹ This was a common issue for members throughout the three bands. Having access to the DMIs, particularly the Soundbeam and the Magic Flute, beyond the weekly rehearsals was not possible for most members. This was mainly due to DMIs being expensive and often out of the price range of band members.²¹²

Angela stressed that progression was very important to Cillian and was inextricably linked to him engaging in a meaningful way in the band:

He wants to progress more and more. It's his life now. These sessions keep him going during the week. It's the smallest things, but they just mean so much and then it keeps us all going as well because obviously we worry, I worry about him 24 hours a day. When he is happy then sure I'm happy.
(Angela McSweeney)

I observed that there was somewhat of an inequality when it came to the

²¹⁰ There was a 10% cut to Disability support services in Ireland between 2008 and 2014 (Social Justice Ireland, 2014). This has resulted in some family members having to provide necessary support for people with disabilities, including Cillian.

²¹¹ His communication device, which cost €15,000, broke in Sept 2013. Between then and February 2015, when he received his new device, he was using a borrowed and partially broken MyTobi device.

²¹² The Soundbeam cost approximately €4000 and the Magic Flute cost €1500.

availability of progression opportunities for members from the TMP and Cillian. TMP member were able to progress easily to further education and employment, however this proved difficult for Cillian. I propose this inequality existed because of limited resources and inappropriate technologies afforded to Cillian. Graham also supports this proposition as he suggested that the inequality of progression from Circles, was rooted in Cillian having to have such a large amount of support from a band facilitator to use the Soundbeam. Graham was responsible for setting up and inputting information into the Soundbeam so Cillian can musically engage with the band. He proposed that if Cillian had more independence with Soundbeam or other DMIs, he would subsequently be able to engage in further courses and music activities beyond Circles:

When I think about Cillian working in the band, I think in an ideal sense it would be me not having to interact with him on the technology level - not having to go oh I'll switch that on for ya there because he hears the music. He hears what he wants to do. He should be able to make a choice to do that without it having to be set up for him. (Graham McCarthy).

These reflections led Graham, as part of his MSc project in Music and Technology at the CIT CSM, to develop Digit-Eyes. Digit-Eyes, as described in Chapter 9, is an eye gaze accessible sampler that works in conjunction with E-Scape. This combination enables Cillian to independently create, perform and progress musically both in and outside the inclusive band.

Gaining access to performance venues was also a continuous physical barrier for Circles throughout this research period. I found there were very few performance venues in Cork city that were fully accessible for wheelchair users. Some had accessible audience areas, however many did not have access to

performance areas. Furthermore some venues that had ‘wheelchair access’, even to the audience areas, were only to the minimum standard and did not accommodate larger wheelchairs due to smaller dimensions and limited weight capacity of the lifts. Aiming to address this issue Cillian’s father Tom, brought a mobile ramp to all Circles performances. Where it was not possible to use this ramp, Cillian had often been lifted in his wheelchair to be placed on the stage. This was a disabling barrier that Cillian had often raised awareness about when he had been to various performance venues that were inaccessible in the city. Performance was represented as a significant and positive aspect of all of the inclusive music bands. Physical access to performances spaces was an unforeseen challenge in this study. Margaret O’Sullivan, the coordinator of MGCC echoed this challenge when discussing the inclusion of the Till 4 band in the annual MGCC Concert:

Even going into a venue like the Opera House and challenging the Opera House to make it possible, not just possible but make it ordinary, easy, normal, for the people who use wheelchairs to get on the stage. It's a basic thing. Those venues are supposed to be accessible, but they never think that there might be performers in wheelchairs. You know, they're accessible for the public up to a point. (Margaret O’Sullivan).

I found throughout this research period that many attitudinal barriers existed when developing inclusive music practice for each of the three bands in Cork city. In Till 4 I observed some attitudes of low expectation of achievement, emanating from individuals with disabilities, their families as well as from wider communities and organisations in Cork city. Initially the Till 4 students, from both schools displayed very low expectations of being involved in an inclusive band. Many felt they would not have the capacity to engage effectively in music

making and learning, particularly on a performance level. Muireann the classroom teacher at SDC highlighted that often the children have very low self-esteem when it comes to educational attainment. She implied that even parents would have low expectations of their children doing most activities, which she suggested results in limited support from some parents:

They feel sure God help us, why waste the time or the energy, why bother doing that. It's something to be aware of when dealing with students with disabilities. At times its not just the learned helplessness, its worse than that even. And it's been constantly reinforced by society by family, by friends. (Muireann O'Shea).

She continued to describe her understanding of the lack support from parents when the project was first introduced and their hesitancy to move beyond disability services:

I think they have resigned themselves to the fact they are never actually going to have access or to achieve anything. They are very wary. Its a societal thing because they have always been passed over, they have always been treated as second class citizens. And with the attitude being 'you are lucky to get what you are getting and be grateful for that' and that attitude is there, which is horrendous in this day and age and it's still there and I'm not sure if it will ever go away (Muireann O'Shea).

Shauni, a Till 4 band member from SDC, reiterated a discussion she had with her mother after her first day at Till 4 rehearsals in TMS. Her mother was very anxious that her daughter Shauni would be bullied, 'mocked', in a mainstream secondary school because of her disability:

And the first day when I went up, my mam says to me, was there anybody mocking me up there. And I goes no. Nobody was mocking me up there. She [mam] turned around and said Shauni tell the truth. And I said mam there wasn't. There was nobody mocking me up there. And there wasn't either like? There was nobody mocking me like. Why would they mock me? Twas kind upsetting alright cause there was nobody mocking me. (Shauni Breen).

I observed that this anxiety lessened and support from parents grew exponentially as the project progressed, particularly once parents saw their children performing in public events, including the Music Generation Concert Party at the Cork Opera House.

Beyond individuals and family members, I have also witnessed some limiting perceptions of the musical ‘capabilities’ of students with disabilities emerging from organisations and educational settings in Cork city. Some of these perceptions were limited to the belief that people with disabilities could solely engage in music for therapeutic benefits, rather than for artistic or music education purposes. I found there was often confusion between music therapy practice, which has therapeutic aims and objectives, when engaging people in music making, and music education practice, which focuses on educational aims and objectives. This confusion occasionally permeated educational organisations in the city, which led to attitudinal barriers for band members wanting to gain access to music education courses beyond the three inclusive bands in this study. To address this confusion, SoundOUT raising awareness of inclusive music practice and is providing support for educational institutions to facilitate more inclusive music making and learning opportunities for people with disabilities in their programmes. For instance SoundOUT has collaborated with City North

College to make their FETAC level 5 music theory course universally accessible.

I observed that there were some internal attitudinal barriers present in Mish Mash members, where some found it difficult to make choices independently, resulting in them limiting their involvement in creative activities. I found that this was most prevalent in members who are full time disability service users. A lot of work takes place within Mish Mash to support members to take ownership of their work and make independent choices to develop and follow their own 'line of flight'.

In order for inclusive music practice to become normalised in Cork city, I aimed to challenge, through regular performances and dissemination of research in diverse contexts, both the physical and attitudinal barriers encountered by people with disabilities engaging in music making and learning. A core vision of SoundOUT is that the use of DMIs will become normalised in music practice, to ensure universal accessibility and progression opportunities for all abilities in the city. This vision aims to bring the ethos of inclusive music education from the margins to the core of music education development and practice in Cork city.

Sustainability

Sustainability of this inclusive music practice, was a recurring issues that was highlighted by many research participants, including parents, facilitators and family members, from all three bands. Cillian from Circles was particularly worried about this issue when I interviewed both him and his mother Angela. Cillian's engagement in music projects prior to Circles was often on a short-term basis due to limited on-going funding for music projects. Angela, his mother,

recalled that Cillian has ‘always been involved in once-off projects and then always at the mercy of funds. Projects just came and went’ (Angela McSweeney). When the first pilot inclusive music band began in response to Cillian’s letter of requests, Angela was very anxious about his involvement, as she was worried his hopes would be shattered again, if Circles turned out to be a short-term project. She described Cillian’s anxiety about being involved in the project as,

He just loves doing it but he’s always anxious that oh it’s going to fall through or something is going to happen, he’s a worrier. It’s the story of his life. He’s afraid that it could be gone in the morning and then he’s left with nothing to do. (Angela McSweeney).

Later Cillian and Angela explained that an element that contributed to that anxiety was the fact that I was the only music facilitator in Cork city using DMIs at that period. Cillian felt that if I left Cork, he would not be able to work with another music facilitator with the appropriate skills to include him in a meaningful way. To address this I provided professional development opportunities for a range of music facilitators in Cork city on the use of DMIs. I also facilitated in-depth training on the use of Soundbeam technology with Graham from Circles and provided a way for him to transition from being a band member in Circles, to a facilitator that could also work with Cillian using Soundbeam technology.

Another sustainability challenge in Circles was the lack of provision for support for Cillian’s involvement in the band. Throughout this research period, Cillian’s parents, as previously discussed in the barriers to progression section earlier in this chapter, provided the necessary support for him to participate in

Circles. Angela, Cillian's mother stated that,

Tom and I both support each other to support Cillian, because obviously one of us couldn't do it without the other. If I was working full time I couldn't be here for Cillian and Tom couldn't be guaranteed to be here either, so then he'd be dependent on a PA support which isn't there. Because the government funding isn't there. He's only funded for 3 hours a week outside of disability services and that's it. If I was to start work in the morning and Tom was as well, unless there was a PA then Cillian couldn't come here, he physically couldn't come here [to circles rehearsals]. (Angela McSweeney).

The provision of ongoing funding from MGCC ensured the sustainability of Circles and Till 4 between 2012 and 2015. In 2015 there was a review of the SoundOUT programme and continued support of Circles, by MGCC and the Department of Education and Science (DES), was expressed. When discussing the sustainability of both Circles and Till 4, Margaret O'Sullivan from MGCC advocated that 'sustaining the long term prospects of the community partners, especially a real flagship programme such as SoundOUT, is really, really important.' (Margaret O'Sullivan). She highlighted that in general, there can often be a danger of funding bodies focusing on short-term projects or emphasising quantity over quality, due to the resource heavy nature of inclusive practice. I have witnessed this issue through my role as fundraiser for SoundOUT. Funding allocation to community based arts organisations can often be sporadic and short term in nature. This had a significant impact on the sustainability of this work. For example Mish Mash received once-off funding (12 weeks), resulting in the band subsequently relying on members being able to pay fees, combined with the volunteer work of facilitators, which was a

challenge, particularly during the economic recession which existed in Ireland during this research period. It also relied on the good will of venues to provide space.

In addition to having the necessary resources to sustain this inclusive practice, the availability of expertise is also crucial. Opportunity for training and professional development for musicians and educators was a recurring theme when discussing the sustainability of inclusive practice. Both Rory and Jessica, band facilitators from Till 4, described their teacher training (as formal post-primary music educators in Ireland and the US respectively) as offering insufficient inclusive music education strategies. Jessica highlighted that when she first started as a band facilitator with Till 4, she felt ‘self-conscious that I didn’t have the training, because I don’t have a background in disability studies.’ (Jessica Cawley). Rory also pointed to the lack to training on the use of technology within his own formal teacher training, previous to the Till 4 band, and the need for ongoing professional development: ‘I did a whole year of teacher training but they didn’t really touch on technology at all. I think a lot of ongoing training is important’ (Rory McGovern).

The professional development that was undertaken with all of the band facilitators was informal, and very much a collaborative skill-sharing process. Within the Till 4 project, Muireann the classroom teacher at SDC, provided disability awareness training, at the beginning of the project. All facilitators and classroom teachers felt that this training was hugely valuable in developing the inclusive practice in the band. Muireann emphasised that ‘disability awareness

and training for musicians working within these bands is essential’ (Muireann O’Shea). Combined with this training, Jessica from Till 4 pointed to the importance of experiential learning through practice. Rory, also from Till 4, felt that professional development through practice, within a supportive environment, was a core element of Till 4. He stated that ‘everything is a challenge. But I feel like I’ve learned a lot from the project already’ (Rory McGovern). Graham, from Circles and Mish Mash, also referenced the importance of continuous and experiential training: ‘training through doing’ (Graham McCarthy). Similar to Till 4, the training on the use of DMIs in Mish Mash was very collaborative and informal. ‘Learning the ropes with the technology’ in this way enabled Graham to feel comfortable enough to facilitate music making using DMIs within Circles and Mish Mash, and ultimately led to his career as a music facilitator in Cork city. When discussing the training needs specific to using technology within inclusive music education settings, Rory, the band facilitator in Till 4, emphasised that it is rare to,

Come across people who have both – be able to use technology and have the teaching music qualification. It’s hard enough knowing how to do it never mind knowing how to deliver it. I’ve had a 10 year lead up to using this project. I know how to use this technology.’ (Rory McGovern).

Graham from Circles and Mish Mash stressed the importance of progressive professional development: ‘There is always room in how you can improve upon skills.’ (Graham McCarthy).

Patricia, the principal at SDC, suggested that when thinking about sustainability and professional development in relation to inclusive music practice, schools should look to sports education for inspiration as they have

‘specialists working with teachers’ (Patricia Harrington). She felt this approach would support inclusive music practice to flourish within schools. She advocated for peer-to-peer learning amongst musicians and teachers throughout the Till 4 project and as a result collaboration between teachers and band facilitators was a large aspect of this study. Patricia emphasised that she could ‘see the practice has improved in teachers radically’ since the project began. Ongoing support for classroom teachers from band facilitators has been beneficial for the school. However as described in Chapter 9, the lack of time for continuing communication and collaboration was a prominent challenge.

When discussing addressing the issues of sustainability of inclusive music practice in Cork city through professional development of music educators involved in the MGCC programme, Margaret pointed to her intentions to encourage more use of technology throughout community music education programmes they are supporting:

I can see how it makes music making very accessible for children who don’t have a formal music education background. I think it has huge value from that point of view (Margaret O’Sullivan).

Empowering band facilitators in this study to engage in experiential learning, combined with various professional development activities, provided a significant platform for ongoing and sustainable inclusive music practice in the city. Edel Sullivan, a community music lecturer from CIT Cork School of Music, was an audience member and collaborator at many of the three inclusive band performances.

She highlighted that involvement of young people and music students in inclusive music practice is of,

Immeasurable value in terms of seeing the reality for someone who might be interested in that career. It's all essential, all part of being a developing musician (Edel Sullivan).

I found through this research process, gathering and sharing resources through partnerships, skill sharing amongst facilitators and organisations, particularly in the area of using DMIs, combined with advocacy through performances, ensures a certain level of sustainability. The musical, personal, and social outcomes presented in this thesis give insight into the importance of sustaining this inclusive practice. As Karl suggests, when referring to sustainability issues in the Mish Mash band: 'I think it's a great job that we are doing and it should be kept going.' (Karl Murphy).

Reflections and Implication of Research

This study is predicated on the belief that everyone has a right to access meaningful and inclusive music making and learning, including people with disabilities. Through the development of three inclusive music bands and the adoption of a qualitative research methodology that incorporated participatory action research and case study design, I aimed to gain a deeper insight into the factors which constitute inclusive practice in Cork city. I sought to identify the conditions necessary to support this inclusive approach to music making and learning in the city. A core objective was to increase my understanding of an inclusive practice that incorporates DMIs, with the intention of including some of the most marginalized individuals in our society - individuals with profound physical disabilities. I wanted to discover and document the experiences of using DMIs for music making and learning within inclusive music bands. I specifically aimed to determine if the use of DMIs could enhance meaningful engagement in music making and learning for individuals with disabilities. The overall ambition for this study is to identify whether such an inclusive model of music making and learning, incorporating DMIs, could contribute to the furthering of the social justice and equality agenda in music education discourse in Ireland and internationally.

This is the first study in Ireland to examine the experiences of inclusive music making and learning using DMIs. It emerged and responded to specific requests for increased opportunities for individuals with physical disabilities to engage in active, progressive and inclusive music making and learning in the city. These requests provided the strongest catalysts for me to embark upon the

development of three inclusive music bands in Cork city: Circles, Till 4 and Mish Mash. The dissertation presents a comprehensive examination of the evolution of these bands, with a view to capturing vital information pertaining to the successes and challenges associated with this previously inadequately represented area. The lack of opportunity for inclusive music making and learning in the city motivated me to develop this inclusive practice. I aimed to ensure that each band emerged from individual's aims and ambitions for music making and learning, in order to ensure the experiences were socio-culturally relevant and meaningful for all members.

This practice was supported in Cork city, where issues of social inclusion are a prominent feature in the city's music education agenda. Furthermore, the recent developments in the fields of inclusive education, community music and music education on a local and national level, contributed to a climate where this inclusive practice was not outside a frame of reference for policy developers and funding bodies in Cork city. Due to the fact that there was minimal research and practice relating to music making and learning that was inclusive of individuals with disabilities, there was strong support for the development of this practice from its inception.

Summary of Findings

The findings in Chapters 8, 9 and 10, revealed the conditions that nurtured the evolution of the inclusive music practice in this study. Primarily, I found that partnerships were crucial in supporting the development of the three inclusive bands. Local, national and international partnerships provided opportunities to acquire resources to support unique progression routes or 'lines of flight' that

were meaningful and valuable to each band member. While partnerships were central to the survival of SoundOUT, I recognised the necessity for these partnerships to be mutually beneficial in order to be effective and not overburden one particular partner. I found that coordination and regular communication of needs between partners supported this balance of needs. Overall, partnerships were a positive and essential element of the three inclusive bands in this study. However, I found them to be both unreliable and fragile, and, therefore, less than ideal as a foundation for this practice.

When considering what constitutes the inclusive music practice in each band, my research suggests that adopting informal and collaborative learning strategies was crucial in facilitating members to develop their own 'lines of flight'. The findings suggest that these strategies helped to facilitate experiences that were creative, culturally relevant and meaningful for all members. Moreover, the creation of a safe learning environment was critical to this inclusive model of music make and learning. This environment incorporated key features such as a flexibility, openness to diversity and a focus on positivity. Additionally, the ability of the facilitator to engage in diverse modes of communication and cultivate awareness of learning styles and needs in the group proved important to the effective facilitation of an inclusive band. Creating the conditions that allowed members to freely explore and express themselves through diverse instrumentation and styles of music was also critical in this practice. Furthermore, as band members themselves pointed out, engaging in performance itself facilitating meaningful engagement.

The creative use of DMIs was also fundamental in facilitating members

with profound physical disabilities to follow their own meaningful ‘lines of flight’. The findings revealed that DMIs, when chosen to respond to individual’s values and musical ambitions, have the potential to enhance meaningful engagement in inclusive music making and learning environments for individuals with profound physical disabilities. I discovered that it was necessary to adapt DMI use to respond to individual needs in order to enhance creative independence and ultimately facilitate meaningful engagement for each musician. While experiences of members using DMIs were, for the most part, positive, there was also many challenges, most notably the usability of DMIs for improvisation activities in creative music making practices. Adapting DMIs expanded the creative horizons for previously marginalised individuals, resulted in members experiencing deep personal and social development.

Research respondents stated that involvement in the Circles, Till 4 and Mish Mash bands provided opportunities for self-expression and happiness, which they felt led to increased confidence, self-empowerment and identity development. Many also highlighted the importance of the social aspects of being involved in each of the inclusive music bands. For some it was the first time they were able to actively participate in activities alongside typically developing peers. This had a profound and empowering impact on members. Also I found that the use of DMIs that facilitate access to high quality sounds often challenged the perception of the musical ‘capabilities’ of people with disabilities. Previously many musical endeavours in the realm of music making by people with disabilities were hampered by low quality digital instrument sound. I discovered a strong sense of pride relating to the creation of high quality

sounds when discussing the experiences of music making and learning with research participants. In addition, advocacy became central to this practice as it emerged amongst the musicians, as epitomised in the following statement by Karl Murphy, a member of Mish Mash: ‘Let’s show them what we can do. If we don’t show them they won’t know’ (Karl Murphy).

The findings suggest that progression is strongly connected to meaningful engagement for many of the band members. I discovered there were many physical and attitudinal barriers to meaningful progression, particularly for the members with disabilities who use DMIs. For many, these barriers still exist and have to be overcome on a regular basis. Musical progression and transition was made possible for the majority of band members in each of the inclusive bands, through ongoing advocacy within disability services and educational agencies.²¹³

Practical Implications of Research

Through dissemination of this research, via seminars, workshops, performances and publications, heightened awareness and knowledge of inclusive music practice in Cork city was made possible. I have been active on a range of boards, such as the Arts and Disability Network in Cork city, Society for Music Education in Ireland (SMEI) and the Cork Music Education Partnership (CMEP).

²¹³ Cillian from Circles and members of Mish Mash continued onto further music education courses at City North College with the support of SoundOUT. Also three of the four Till 4 members with disabilities also transitioned into music groups at their disability services, again with the support of SoundOUT.

This provided me the opportunity to share the inclusive methodologies developed in the course of my research and influence local and national arts development and music education agendas.

This study specifically highlighted the ‘capabilities’ of musicians with disabilities in the city, while also emphasising the gaps in provision for inclusive music making and learning in Cork. As a direct result of advocacy and dissemination of research findings, there has been a noticeable surge in the willingness of organisations to support this model of music making and learning, along with an increase in sustainable funding being made available from agencies such as Music Generation Cork City (MGCC) and the Cork Education and Training Board (CCETB) for such inclusive practice. This has significant practical implications for young people with disabilities in Cork city; for the first time there is a sustainable and progressive model of inclusive music making made available, which they may choose to participate in. Several members who were previously excluded from music making and learning are currently engaged in ongoing music programmes as a direct result of this study, and their development, both musically and personally, is clearly apparent. The members of the inclusive bands in this study have proved to be the strongest advocates for this work, within their families, communities and their disability services. This advocacy has resulted in disability services in Cork city increasing the level of inclusive music making opportunities for their service users.

Collaboration with local music facilitators and organisations enabled me to spread awareness of the inclusive practice and share resources and specific skills that were developed as part of this study. This sharing has contributed to the

development of a small community of facilitators who are committed to inclusive music practice in the city. Some have continued their own professional development and education in this field. This has had direct practical implications for individuals with disabilities in Cork city, as it has opened up further possibilities for inclusive music making and learning beyond SoundOUT.

One of the most notable practical implications of this study was the development of partnerships with technology designers and local educational institutes, which has offered enticing possibilities to overcome the physical challenge of engaging in creative music making using DMIs. Significant evolution in the design and development of DMIs that enables increased creative independence for musicians with disabilities has been instigated by this study.²¹⁴

Theoretical Implications of Research

This study was influenced by literature that explored inclusive practice in music education, including Jellison's research on developing inclusive music classrooms and Darrow and Adamek's research on Music in Special Education settings, and their more recent studies on inclusive practice in music classrooms. To further comprehend the inclusive practice in this study, I gained insight from theoretical concepts presented in Sen's Capabilities Approach, Deleuze's Rhizome Theory, and Bronfenbrenner's Model of Social Ecology.

²¹⁴ One of the most significant development was Graham McCarthy's Digit-Eyes software which he developed as part of his MSc in Music and Technology at the CIT Cork School of Music. Also James Fogarty's Music-ability DMI, specifically designed for Mish Mash member Jenny, was a noteworthy progress.

The Model of Social Ecology proposed by Bronfenbrenner, enabled me to frame an examination of my inclusive practice on both a systemic level and an individual level. Using this model, I mapped and explored the impact of interactions between individuals and wider social, economic and cultural developments. By viewing this work from an ecological perspective, the impact of the environment and society, on the development of musicians who use DMIs for music making and learning is acknowledged. Similarly, this perspective reveals that changes made by an individual on a micro level have the potential to impact further change in wider socio-cultural contexts. This is evident from the impact the members of inclusive bands, in particular Cillian from Circles, have had on a macro level, such as the development of new technologies, generation of inclusive funding priorities and policy development in education agencies.

In addition to adopting an ecological perspective, I also drew on elements of the Capabilities Approach for inspiration as I developed a person-centred approach in each band. This process sought to enhance meaningful engagement in the three bands by empowering members to achieve what he or she deemed valuable within a music making and learning context. As can be seen from findings in the previous chapters, this approach yielded vast personal and social development experiences for members in each inclusive band. The Capabilities Approach is particularly useful to understand the inclusive music practice in this study as it facilitates a focus on enabling an individual to achieve their musical ambitions, while taking into consideration the impact of impairment and societal factors. Inclusive practice, from a capabilities perspective, evaluates an individual's freedom to choose music making as a meaningful activity, thus

enhancing the ‘democratic and socially-just educational entitlement’ of individuals (Tonson et al., 2013, p.492).. It also supports the allocation of the necessary supports for each individual to achieve their meaningful activity. This can be seen, for example, in the use of DMIs to enable access to music making for individuals who wish to play music but don’t have the physical capability to play conventional instruments. The inclusive music practice in this study is based on the principle that freedom of choice and empowerment of individuals to achieve what they deem valuable is central to facilitating meaningful engagement.

To understand this person-centred process and its suitability on a systemic level, the Rhizome theory is useful. The Rhizome Theory, when applied in an educational context, advocates for flexible and multiple approaches to learning, rather than a single approach intended to accommodate all diverse learners. The Rhizome theory is based on a celebration of diversity and empowerment of individuals to develop and follow their own ‘line of flight’. Rhizomatic learning in the context of this study suggests a music programme should be flexible enough to accommodate these ‘lines of flight’, by moving and adapting to the environment in which it exists and by relying on connections, while still being underpinned by core values and principles. Each band facilitated members to undertake diverse progression routes or ‘lines of flight’ in the same learning environment, in order to enhance meaningful engagement for all learners.

Recommendations for Future Research

As this field of inclusive music making and learning is in its infancy in Ireland, there is a great need for further research in the area. I found throughout this study that the benefits of inclusive music making and learning are widely acknowledged, however there is a lack of provision to support implementation. In these concluding paragraphs I make some recommendations for future research in this area, which would further this inclusive agenda both in Ireland and internationally.

To bring this inclusive practice from the margins into a more central position in music education discourse, there needs to be a shift of focus from viewing it as an addendum within mainstream music education structure, towards a more Universal Design for Learning (UDL) approach, where diversity is celebrated and appropriately supported. Embedding a UDL framework in music classrooms, combined with Jellison's four guiding principles of inclusive music making, offer solid guidelines for inclusive music practice to develop in Ireland. Research that explores the further implementation of these guiding strategies within diverse inclusive music environments would provide significant insight for this practice and field of study in Ireland.

My research reveals that meaningful engagement of individuals with profound physical disabilities was enhanced through the creative use of DMIs within inclusive environments. As technological development is progressing at an exponential rate, it can be somewhat difficult to keep up to date with the latest advancements (Finney & Burnard, 2009). This can be an inhibitor for musicians and educators currently engaging with technology. Himonides suggests that

emerging research and practice should 'be less focused on what technology to use and how to use it, and more on why a technology should be employed and how it can be used effectively in celebrating musicality and furthering development as musicians and learners' (Himonides, 2012, p.430). This study emphasises the importance of using DMIs to include marginalized individuals in a meaningful way, while also highlighting some challenges of usability. A more extensive examination of the experiences of non-specialist educators using DMIs for inclusive music making and learning is necessary for further technological and pedagogical development in this area. In particular, examining inclusive music practice in formal education settings in Ireland offers rich research potential, as there are no studies to date in this context. As the number of students being included in mainstream education environments in Ireland is expanding significantly, there is a crucial need for further examination and intervention in this area.

This study is grounded in the belief that music educators have the power to initiate change if they view music education not merely as a development of music learning but as an evolving process underpinned by democratic and social justice praxis. It was my aim to initiate change through the development of the three inclusive bands, and through the dissemination of this research. I believe that without change we will perpetuate the existing patterns of exclusion (Wright 2012, p. 453).

Appendices

Appendix A – Interview with Jenny Garde

Interview with Jenny Garde – 3rd of March 2014 Mish Mash – UCC School of Music and Theatre

J – Jenny; G- Grainne; D – Denise (Jenny’s Mother)

G – why did you come to mish mash?

J – Your

G – me? Was it me coming down to the centre on a Friday

J – nod yes.

G – what was it about the music on a Friday that made you think- ok this could be good to do outside of the centre?

J – My family have music

G – do your brothers and sisters play music?

D – her sister plays the piano and flute and her brother plays the piano and guitar. All her family play music.

G – you wanted to get in on the action?

J – nods yes

D – all her cousins are musicians as well. Her brother was in the battle of the bands.

J – two women in the family.

D – what page do you want?

J – Points out Aiveen Kearney from CSM.

D – aiveen is you aunt in law. She is the vice principal of the school of music.

G – oh right

J – laughs.

G – there is loads of music in your family then. Did you join because you wanted to make music and be in a band?

J – points out yes

G- what do you like about being involved in mish mash

J – jenny points out understand and wheelchair and points at me.

D- the music is accessible through Grainne.

G – Ok.

D – you (grainne) that she (jenny) is in a wheelchair and can make music still. Is that right?

J – nods yes.

G – what do I do that makes you think I understand? Is there certain things that I do that make it easier to make music?

J – nods yes

G – like what?

J – points at ipad.

G the ipad makes it easier?

J – yes

G – do you like using the ipad to make music?

J – yes

G – are there any challenges to using the ipad?

J – nods yes and points to where she wants a mount to be attached to her wheelchair so she can access it independently.

G – oh the mount is it?

J – nods yes.

D- I'm not too sure if we will be able to use all the apps though if we get that mount.

G – oh right. We'll find ways around that.

J – points to C and man

G - Did Cillian have role in deciding you playing music?

J – nods yes

D – and other people did too. Olivia's mam was on at you to come too. She would have pushed you.

G - was it word of mouth?

D – ya Olivia always said you should come up.

J – I wanton...

D – you'll have to give me another word.

J – you...want...play...

D- you want to play like cillian?

J – shakes head for no. I...Want....Play....with

D- you want to play with Cillian?

J - nods head yes.

G – cillian has gone through all these stages too. He was in groups, then individual lessons, and then he joined a band. Is that something you would be interested in doing too?

J – nods yes. Points at help and then points at me

G – you want me to help you to do it?

J – nods yes.

G – its good to have an aim.

D – it'd be nice.

G – what has it meant to be involved in mishmash

J – Points to Get and out.

D – socializing through music.

J – jenny points out Play music – and sing

G – anything else?

J – no.

G - do you think you have learnt much?

J – points to huge!

G – what have you learnt?

J- Points to ipad and PA system

G – about technology and how it works?

J – nods yes. Points to word understanding.

D – understanding the technology and how it plugs in etc...

J – nods yes.

G – Do you think it is good to include technology in a band.

J – nods vigorously.

D – that's a yes anyway.

G – ya?

J – nods yes. Points to loud.

D- it makes it louder?

J – nods yes.

G – oh right you are talking about the PA?

J – nods yes.

G- what about the ipads, Soundbeams etc...??

J – nods yes. Points to in and wheelchairs.

D – its good to include people in wheelchairs.

J – nods vigorously again.

G- oh good. Does your brother have an ipad?

D – we all have ipads. He has garageband.

G – it includes everyone. What are the best bits about mish mash?

J –points to I and can and play and music.

G – its all about the music?

J – yes.

G – if you could change anything what would it be?

J – points to the wires.

G – the wires?

J – nods yes

D – make it wireless

G- that would make it easier.

D – you should go find someone to invent a new system

G – how do you feel about the performance side of Mish Mash. Is it good to do them?

J – nods yes. And points to two month.

G- we should do them every two months?

J – nods

G – karl said the same thing. Ha.

J – laughs.

G – we should go gigging then!

J – point to three months.

G- Did you like the night club performance?

J – Points at don't and cry and baby

D – if we gig in a night club there won't be any babies around.

G – do you think it would be more adult to do a gig at night time?

J – nod vigorously.

D – it'd be more bandy?

J – nods.

D – we should get in touch with the academy of popular music and do some of their gigs.

J – points to with and choir.

G – would you like to perform with a choir?

J – nods yes

G – We'll have to look into that. anything else you would like to say about the group?

J – points to adults and can and play and write

D – do you mean adults with disabilities?

G – are you trying to say that mish mash shows that adults with disabilities can make music?

J – jenny nods.,

D – is it that is what mish mash stands for?

J – nods.

D – it gives people with disabilities a voice and a chance to make music.

J – nods yes

G – do you think technology is important in doing that?

J – nods yes.

D – definitely very important. Extremely important

G – anything else you would like to say?

J – points to have and time and play and music and sing.

G- you now have a chance to make and play music with mish mash?

J – nods yes.

D – where you wouldn't have had before?

J – nods yes.

G – you didn't have a chance before?

D –she can go along to concert and go along and listen but she can't actually participate.

G – ok

J – Points to don't like

D – she doesn't like not being able to participate.

G – it's all about getting involved isn't it. Thanks a million Jenny for all of that.

Appendix B – Interviews for PhD

Circles– September 2012 – June 2014 – 11 interviews.

Interviews	Role	Date
Cillian McSweeney (1 st interview)	Member	24/01/13
Angela McSweeney (1 st interview)	Parent	19/07/11
Brian O'Donovan	Personal Assistant	13/07/12
Graham McCarthy	Facilitator	19/12/12
Dave Barrett	Band Member	03/02/2012
Cillian McSweeney (2 nd interview)	Band Member	13/07/2013
Angela McSweeney (2 nd interview)	Parent	03/02/2012
Miriam Gallagher	Person Centred Planner	11/05/2012
Mary Ellen O'Sullivan	SoundOUT member	11.01.2013
Band Members – Focus Group	Band Members	14/12/2012
Audience Members – Focus Group	Audience Members	17.06.2013

Till 4 – October 2012 – June 2014 – 13 interviews

Interviews	Role	Date
Terence MacSwiney		
Deana Purcell	Band Member	26.02.2014
Steward Murphy	Band Member	26.02.2014
Josh Crean	Band Member	26.02.2014
Darren O'Leary	Band Member	26.02.2014
School of Divine Child Students		
Danielle O'Sullivan	Band Member	18.06.2013
Cian O'Sullivan	Band Member	18.06.2013
Shauni Breen	Band Member	18.06.2013
John O'Shea	Band Member	18.06.2013
Music Tutors		
Jessica Cawley	Facilitator	20.12.2012
Rory McGovern	Facilitator	20.12.2012
Classroom Teacher at SDC		
Muireann O'Shea	Classroom Teacher	16.01.2013
Principal at SDC		
Patricia Harrington	Principal	18.06.2013
Music Generation		
Margaret O'Sullivan – MEP CC	Coordinator	13.03.2014

Mish Mash – November 2012- June 2014 – 9 interviews.

Interviews	Role	Date
Aoife O’Sullivan	Band Member	04.10.2014
Riobard Lankford	Band Member	04.10.2014
Christine Haughey	Band Member	16.04.2014
Jenny Garde	Band Member	03.03.2014
Denise Garde	parent	03.03.2014
Karl Murphy	Band Member	03.03.2014
Kevin English	Band Member	16.04.2014
Graham McCarthy	Facilitator	04.03.2014
Aideen Carroll	Band Member	03.03.2014

Appendix C – Press from Inclusive Music Bands.

Press from Pilot Project



Cillian McSweeney with his parents, Angela and Tom, ahead of his performance at Aras an Uachtarain. DARAGH McSWEENEY/PROVISION

Music-mad Cillian on song for hi-tech presidential show

Ralph Riegel

A YOUNG man with cerebral palsy, who cannot speak unaided, will perform his own song for President Mary McAleese thanks to computer technology.

Cillian McSweeney (21), from Wilton in Cork, will play his song 'Equal' on Saturday for a select audience at Aras an Uachtarain, including the President, Taoiseach Enda

Kenny and his personal music idols The Coronas.

Cillian communicates via a computerised voice machine called a 'dyno-box'.

Thanks to advanced technology, another system, known as 'sound beam', allows Cillian to also use his head or foot to play a synthesised musical instrument, usually a saxophone.

"It is a dream come true for Cillian," his mother Angela said.

"He is absolutely crazy

about music and loves all kinds of bands like The Script, The Coronas and Take That, as well as singers like Rihanna and Adele. In fact, he is going to see Rihanna in Dublin next November," she said.

Music was adjudged to offer Cillian a great outlet for his talents and, after attending Cork Music Works (CMW), he linked up with Knocknaheeny Youth Initiative (KYI), which agreed to put one of his compositions to music.

Cillian set to rock the Áras with song sax solo

by Eoin English



A TALENTED young musician with cerebral palsy who communicates using a hi-tech device is set to rock the Áras with a soulful saxophone solo.

Cillian McSweeney, 21, from Summerstown in Wilton, Cork, will join members of the Knocknaheeny Youth Music Initiative to perform his own composition, *Equal*, at President Mary McAleese's Family Garden Party on Saturday.

They will be sharing the bill with Irish band The Coronas.

"We're absolutely delighted and thrilled," Cillian's mother Angela said.

"The song is about being equal and about how people judge others. It's about his feelings and about how people shouldn't judge him because of his wheelchair — he has a lot more to give."

"Cillian has found a way to express himself and his creativeness — this has opened up a whole new world to him."

Cillian, the eldest of four boys, was born with cerebral palsy, a congenital disorder which affects muscle control.

He is a client of Enable Ireland in East Gate, Cork,



Cillian McSweeney with the Knocknaheeny Youth Music Initiative Band, ahead of their performance of his composition, *Equal*, at President Mary McAleese's Family Garden Party in Dublin on Saturday.

and became involved in an inclusive music project with Cork Music Works.

He wrote the lyrics for *Equal* using his Sound Box communication device which reads his eye movements and transfers the data using predictive text-style technology to produce words.

Then under the guidance of Cork Music Works community musician, Grainne McHale, the band members from Knocknaheeny Youth Music Initiative put music to Cillian's lyrics.

Ms McHale, who is pursuing a PhD in inclusive music in Trinity College Dublin, sourced an assisted music technology called Sound Beam which allows Cillian to programme different sounds, chords and melodies, and

perform with the band.

He will use the movement of his head and feet to trigger switches and beams to play a saxophone solo with the band at Áras an Uachtaráin.

"Cillian has been our star in the last few months," Ms McHale said.

"He loves music, wanted to learn music and be in a band so we figured out a way of doing it."

She said the Cork Music Works programme, which promotes an inclusive approach to music education, is highly successful.

"This model works and we're going to bring it around Ireland," she said.

She has already established international links with universities in Norway and Rotterdam, which pursue

similar courses, and she hopes to deepen the links and collaborations to bring more advanced assisted music technology to Ireland.

She is working with Cillian for her PhD project, using his experience as her case study.

"This project has huge potential on a social and educational basis," she said.

Cillian hopes to write a song for The Script, who played a homecoming gig to 60,000 fans at the Aviva stadium in Dublin last weekend.

His parents, Angela and Tom and his youngest brother, Craig, 10, will travel to Dublin on Saturday but Andrew, 19, and Josh, 14, will stay at home.

● You can listen to Cillian's song on YouTube, <http://exa.mn/equal>

Disabled man's music joy

A YOUNG man who is unable to speak or walk will perform for President Mary McAleese using a device that translates movements into sound.

Cillian McSweeney (21), from Wilton in Cork, has no speech and severely limited control of his movements, but found a way to express himself through music.

He will perform a song due to be released as a single, entitled *Equal*, together with the Knocknaheeny Youth

Music Initiative band.

They will play at an annual garden party hosted by President McAleese at Arras an Uachtarain on Saturday.

Solo

Cillian will use a Soundbeam device, which employs sensor technology to translate movement into digitally generated sound, to perform a saxophone solo.

His mum Angela said: "He is very proud of himself — he knows this is a huge opportunity."



PROUD: Cillian is to play at weekend

Press from Till 4 and Circles

EE - V1

Evening Echo, Friday, February 7, 2014

LIFE 27

Students from special needs and mainstream schools will come together this Sunday to perform original material at Cork Opera House, thanks to SoundOUT and Music Generation.
JANE Mc NAMARA talks to Director of SoundOUT, Grainne McHale, about her work in bringing music education to all, and why the use of new technology is making it possible

W e are highlighting ability rather than the disability. That is the message from Grainne McHale as she prepares for the Music Generation Gala taking place in the Opera House this Sunday.

Grainne is Director of SoundOUT, a community-based organisation that provides all ages and abilities with access to music education.

She says: "The ultimate aim is to make music accessible to all. We run projects in schools and communities and involve a wide range of abilities and disabilities."

"We use a lot of interactive music technology so people with limited movements can make music. We involve older adults and teenagers as well."

Originally from Mayo, Grainne moved to Cork in 2002 to study music in UCC. After graduating, she moved to York, where she completed an MS in Community Music before returning to Cork in 2008.

She is currently doing a PhD on the Use of Technology as a Tool for Inclusion in Music Education.

She says: "I set up SoundOUT as part of my research. I originally had the idea when I worked with Cork Music Works a few years back. SoundOUT emerged from that. It was established in 2011 so we are in our third year and it is fantastic."

"We work with day service centres, primary and secondary schools but the main base for our work is in UCC."

Grainne explains the work in detail. "For example, we work with the School of the Divine Child, which is a special needs school for children with physical and multiple disabilities."

"With new technology we enable students to make melodies and chords with limited movements."

"We bring these students together with students from Sundays Well boys' school and develop bands and they create their own music. The blink of an eye can trigger a sound with some of our software."

"Technology is crucial, without it this work would not be possible. For music to be fully inclusive we need technology. We use a combination of



Lord Mayor of Cork, Cllr Catherine Clancy, launches the Music Generation event last month, with pupils Jason Sheehan, Liam Hopkins and Harold Iberlin, of Sundays Well NS; Brian Lordan, Lee and Scott Duggan and Cory Walsh, Scoil Iosagain, Farranree and Sadhbh McCarthy, Olivia Lawton and Leah Barhado of Scoilghael Mhachan.

Picture: Eddie O'Hare

Grainne is sound out, and so is her music education scheme in Cork!

We accommodate all ages and abilities and really try and adapt the way of teaching to the students.

"We balance social and musical aims. It is as much about the quality of process as well as quality of product. We want to enable everyone to achieve their best."

"With these performances, we want to show what is happening around Cork because, to the best of my knowledge, it is unique."

"There are not many inclusive ensembles that include technology in this way around the country. We are highlighting the abilities rather than the disabilities."

"There can be some attitudinal barriers, but through this work we can remove them."

Grainne adds: "I'm not very sporty but I love getting involved. I think music should be the same, it is not just for the elite who are excellent and very talented and I think music education has a responsibility to make it accessible to everyone."

Grainne, who plays classical piano, adds: "I perform a bit but not as much as I would like! Once I am finished my PhD I would like to play more."

"I do get a chance to play with the ensemble, which is great. It's not really a teacher/student relationship but group facilitation, tutors always play with the students supporting them and playing alongside them."

Grainne says Music Generation has been amazing in changing attitudes and perceptions of the musical ability of people with disability.

"They have been an amazing addition to the music culture of Cork in general. For SoundOUT they have provided a voice."

"There is a danger when working people with disabilities of being marginalised but with Music Generation they have been open to all musical possibilities. They are offering musical tuition to hundreds and hundreds of kids in the city. How could that be bad? It is amazing!"

● The Music Generation Gala is on at the Opera House on Sunday, February 9. Doors 3pm. Tickets €10.

software, some of which has been around since the 1980s."

She adds: "One particular piece of technology we use was developed by Brian Dillon in Kilkenny. The 'Magic Piano' gives students access to musical performance by converting head movements into sounds. They can generate tunes and make tunes without having to play, using arms. That's just one example."

"We do a lot of community work also. Music Generation have helped us to develop work inside schools both mainstream and special needs in an inclusive way, bringing everyone together."

For the concert this Sunday, there will be three groups performing, a primary school, secondary school and community-based ensemble.

"Common to all is that they use interactive music technology in their performance," she explains. "They also all compose their music."

"The primary school will perform an original reggae piece. The secondary school will perform in a pop rock style."

"The community-based ensemble features Cillian McSweeney, a student with cerebral palsy who writes all the lyrics for the band using



Grainne McHale, founder of SoundOUT, demonstrating the sound beam instrument.

Picture: Clare Keogh

"It is a great chance for all the musicians to perform and show people

what they can do."

"Some people want to learn music for a sense of wellbeing. Some have a passion to progress to certain levels."

Cork's musical youths



Left, members of the Junior Barrack Street Band performing at Music Generation Cork City Concert Party at Cork Opera House and, above, Olivia Ni Lachtnáin of Gaelscoil Mhachan warms up on the accordion backstage.

Picture: Clare Keogh



Getting in some early-morning, pre-show rehearsal were Sundays Well Girls NS pupils Shauna Winnett, Fiona Sandova, Megan Mullan, Mary Coffey, Shammai Chi, and Magda Paszkiewicz.

Picture: Clare Keogh



Cillian McSweeney, who is a member of the band Circles, centre stage at the Cork Opera House for the Music Generation Cork City Concert to celebrate the programme's third birthday.

Picture: Clare Keogh



The young man behind the beat, Darren O'Leary of Terence MacSwiney Community College, takes his bow from behind his drum kit.

Picture: Clare Keogh



Luke Ó Flannagáin, Jordan Ó hÉireamhóin and Josh Ó Buachalla of Gaelscoil Mhachan entertaining the audience with their accordion skills.

Picture: Clare Keogh



In the latest in our series focusing on the Music Generation Cork City Programme which aims to make learning and enjoying music accessible for kids all over Cork City, we meet 16-year-old Shauni Breen who is a pupil at The School of the Divine Child, Ballintemple.



"I LOVE listening to music. I like to listen to pop music and my favourite bands include The Overtones, One Direction and JLS.

I play the saxophone. I started learning it a few weeks ago. It took a little while to get a good sound out of it, but it's grand now. I do a bit of singing as well. We've been learning quite a lot of songs with Music Generation. I like singing *Why Do Fools fall in Love* and *Memory*.

Every Monday, my teacher Jessie teaches me saxophone and then I practice playing music with the rest of my class. On Wednesdays, my class goes up to the Terence MacSwiney College. It's really good because we all get to mix together and play music. I've been doing it for quite a while now, I think it must be about a year. I really love it, we all have a laugh and everyone is really friendly.

I enjoy singing the most. Sometimes I play the saxophone and then a bit of singing. It's good to change between the two.

We performed at the Music Generation Concert party at the Cork Opera House earlier this month. There were lots of us backstage and it was good as I got to talk to my friends. I've never been on a stage like that before. The lights were fantastic and it was a really big place but it was grand, I didn't feel scared. I played the saxophone and I did a bit of singing. Cian and Mathew played the drums, Dale played the guitar and Christoph also played the saxophone.

As well as playing, I also got to see Cillian McSweeney. He used to be a student here at the Divine Child and he's now got his own band called Circles. He was very very good. I really enjoyed that!



GREY MATTERS
Sue Russell

I'M NOT even dressed yet and it hasn't been a great start to the day so far.

The last of the milk has gone off and I am having to drink black tea. The slice of bread that I took from the freezer hasn't toasted properly and it's soggy in the middle. Unfortunately I only noticed this after.

I had buttered and spread the marmalade. I hope this is not a portent of things to come!

Mind you, the reason I have such delicious marmalade to spread in the first place is as a result of my visit to the local agricultural show last Sunday.

A common feature of many rural towns and areas, the notion of 'the show' was completely foreign to me as a city dweller.

I remember the very first time I went along to one, taken there by a work colleague who lived in the country and was an avid fisherman. He explained that he was especially keen to see the work of a local man who 'fed flies' in his spare time.

Now at the time I was a very junior colleague to this chap and not wanting to display my total ignorance, I did not ask him to elaborate on how, or more importantly, why anyone would want to tie up flies.

I remember spending part of this long journey into the foothills of the Wicklow mountains trying to imagine the difficulties and delights of such an occupation.

Boy, did I feel like a wit when I saw what was meant by fly tying! I had figured it was something to do with fishing and I'd heard of 'fly fishing' - which I assumed had something to do with fishing using flies as bait.

But the flies of in my world - blue bottles and house flies - bore no resemblance whatsoever to these magical creations. They were imitation mayflies created using feathers in every colour of the rainbow.

So that taught me a lesson about agricultural shows: there's a lot more going on out in those hills than you know about!

So now that I am a country dweller myself I do try to get along to our local show each year. At first, I tried to show willing and interested by entering a few items. I would study the catalogue and try and find a category to suit me.

I knew there was no point in trying to show off my baking, my fruit always sinks to the bottom and my scones are like rock buns. Likewise my flowers could never be guaranteed to produce at the right time and I figured my veggie would not be up to standard either.

I thought the crafts or photography would be more in my line and in fairness I did win third place for one of my photos. But again with the craft section I was a dismal failure.

I had yet again underestimated not just the skills of my fellow entrants, but also their competitiveness and steely determination to be listed in the 'winners at the show' section of the local papers. So now I attend as a mere punter - which is overall much more enjoyable and relaxing.

And reflecting on my experience this year I think I can say that I must be settling in to country life.

I was not astonished to see sheep and cattle being preened and pimped before being paraded around the ring. I did not smirk at a city-slicker grin at the notion of '4 potatoes on plate' as a judging category and I truly admired many of the entries in the amateur art competition.

I did, however, find myself momentarily leaning over a barrier watching some bulls being led around by their proud owners.

I'm sure I could have passed for someone who knows about these things - but really I may as well have been looking into a bush for all I know about cattle.

So I moved on quickly before anyone asked my opinion or recognised my ignorance!

MY CAREER: Gráinne McHale - Director of SoundOUT music programme, part of the Music Generation programme

Gráinne hitting the high notes

Name: Gráinne McHale
Age: 30
Lives: Blarney, Cork
Job title: Director of SoundOUT
Salary bracket: €0 - €20,000
Education background:
I'm originally from Mayo so I started my music education there with a wonderful music teacher called Mary Ryan. I came to Cork in 2002 to do my music degree at UCC. After four fantastic years, I spent two years at the University of York doing my MA in Community Music.
I decided to come back to Cork in 2008 and I'm here ever since.
I'm currently in my final year of my PhD in UCC on inclusive music education.
Hobbies:
I'm learning to play the traditional Irish flute at the moment and I'm loving it, so I'm trying to play as much as possible.
I also love painting and sculpting but unfortunately I don't get to do that as much as I'd like.
I also love a good novel.

Describe your job in five words:
Rewarding, challenging, diverse, engaging and practical.

Describe yourself in five words: Open-minded, positive, hard-working, up for fun and sensitive.

Personality needed for this kind of work?
Empathetic, open-minded, flexible and a fun person.

How long are you doing this job? Three years.

How did you get this job?

I did my transition year work experience at school with a community musician in Mayo. I was completely inspired by this experience so I decided to do music after school with a view to following the career path of a community musician. I started my Music Degree in UCC in 2002. As an undergraduate student I volunteered with various organizations and charities.

I was very fortunate to get involved in a fantastic charity in the city called Cork Music Works, which was set up by Dr Evelyn Grant in 2002. Evelyn has been a mentor to me and supporter of my work since I was an undergraduate volunteer. It was my time at Cork Music Works that ignited my passion for providing access to music making for people with disabilities.

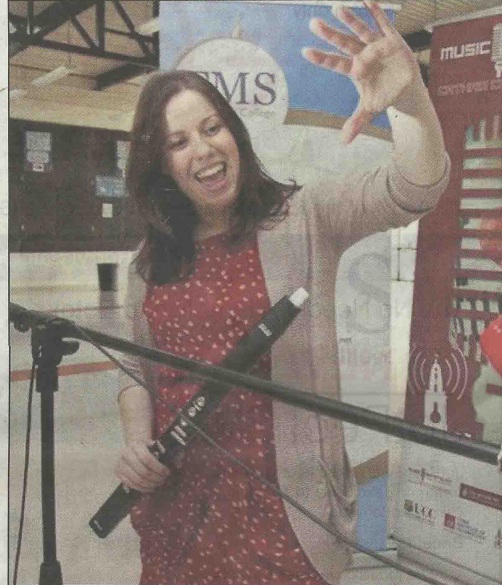
I particularly became interested in the use of technology as a tool for inclusion. In 2006 I received a scholarship to do my MA in Community Music at the University of York to study this further. This was a fantastic experience.

I couldn't wait to get back to Cork to put into practice what I had learnt. So I returned to Cork in 2008 where I worked with Cork Music Works as project Manager until 2011. In 2011, I received a PhD scholarship from UCC College of Arts Celtic Studies and Social Sciences to continue my research on the use of Assistive Music Technology within Inclusive Music Education in Ireland.

SoundOUT began as a research project as part of my PhD which now caters for the music education needs of more than 400 people with diverse learning needs in Cork City.

Do you need particular qualifications or experience?

Working in this area requires diverse skills. Many of the SoundOUT tutors have music degrees or have



Gráinne McHale is the director of the SoundOUT music programme as part of Music Generation Cork City. The SoundOUT Summer Camp runs from July 28 to August 1 and is open to children between seven and 16. For more information visit www.facebook.com/soundoutmusic

a strong background in practical music making, music education and music technology. I found my MA in Community Music was very useful as its aims, such as inclusion, empowerment and diversity, resonate with what SoundOUT is trying to achieve. I feel practical experience and an open flexible attitude to working in this area is the most important thing.

Describe a day at work:

Every day is so different, and it also depends on the time of year. During term time I would teach in a school for about two to three hours. This is part of the Music programme supported by Music Generation Cork City which allows us to provide music and instrumental tuition to over 300 children in Cork City. I also facilitate various community music projects in the evening times.

As I'm still studying, I would try to spend at least two to three hours writing a day. For the summertime we are now gearing up for the SoundOUT summercamp in partnership with Music Generation Cork City.

How many hours do you work a week?
50 hours - this includes my studying work too.

What do you wear to work?
Casual clothes.

Is your job stressful? How? Rate it on a scale of 1-10: 5

The job can be stressful from time to time but the positive aspects outweigh the stress. The most stressful aspect is worrying about the sustainability of the work as we rely on fund-raising for the community music projects.

Do you work with others or on your own?
I work with a range of music facilitators across the city.

When do you plan to retire or give up working?
I can't think that far ahead!

Best bits:
Working with fantastic people and getting to play music every day.

Worst bits:
The uncertainty of the sustainability of the work.

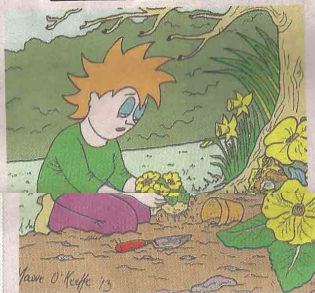
Advice to those who want your job?
Just go for it! Start by volunteering.

Wow!

COLETTE SHERIDAN chats with Grainne McHale from SoundOUT



What women want: P4



The meaning of life: P10



Why couples argue: P13

GOT A STORY?

Write to: WOW!, Evening Echo, City Quarter, Lapps Quay, Cork, email john.dolan@eecho.ie, or call (021) 4802162.

WOW! editor: John Dolan

SoundOUT is about music for everyone



Grainne McHale, founder of SoundOUT, demonstrating the soundbeam instrument.
Picture: Clare Keogh

A MUSIC revolution is taking place in Cork using technology that facilitates young people with disabilities to create and perform music.

This is possible through the work of SoundOUT, founded by Grainne McHale, and they perform tonight at the Lifelong Learning Gala Concert taking place at the Rory Gallagher auditorium at CIT.

It will be a showcase for musicians who refuse to allow their disabilities to constrain them.

Grainne, who studied music at UCC, started volunteering with Cork Music Works, which was founded by former CIT Cork School of Music lecturer, Evelyn Grant, in 2002. Cork Music Works was set up to provide music making and performance opportunities for people with disabilities.

"Once Cork Music Works started to wind down, SoundOUT developed its own momentum as an independent organisation," explains Grainne.

"The idea is to break down barriers in music education and to enable young people with disabilities to develop as artists and perform music on an equal level as their peers."

In partnership with U2-funded Music Generation Cork city, SoundOUT is developing its programme through music workshops, small group tuition and ensemble sessions.

Special instruments such as the magic flute, soundbeam technology and adapted harps are used to make music.

The magic flute is a wind-controlled

musical instrument that enables music performance with limited movement of the head. A similar principle applies to the soundbeam, combining movement sensors and pressure pads, where the tiniest movement of the finger or foot — and even the blink of an eye — enables people to create melody and chords.

As part of Music Generation Cork City's core programme, SoundOUT is working with 300 children in schools in the city, both mainstream schools and special needs schools. The programme is running at Sunday's Well Boys' National School, The School of the Divine Child at the Lavanagh Centre and the Terence MacSwiney Community College.

Grainne is excited about "the transformative effect of being involved in music among young people, both with and without disabilities". She adds: "I was really shocked that people could be marginalised or excluded from music making. I was introduced to new technologies through my research as a music student. I did a masters degree and a doctorate exploring the use of technology as a tool to be used in music education. I was blown away by it."

The youngsters are involved "in self-directed learning. We have adopted an informal approach to music education that is based on research in the UK. The creativity of the students is embedded in the approach we take at SoundOUT. We want to make it as inclusive as possible. We see, day-to-day, the huge impact the project is having on the lives of children and teachers and tutors."

Grainne says her work with the project is extremely rewarding. "To be able to see someone's potential being unlocked by technology is hugely inspiring. I feel that we have a fantastic model of good practice. It's recognised nationally and hopefully it will soon also be recognised internationally."

As well as working within schools, SoundOUT also works with several community-based projects. Members of the Togher Music Project, for example, have established their own band — Circles — which will perform at tonight's concert.

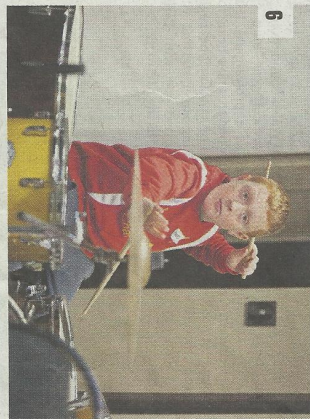
Grainne says that she was worried that if she were to leave SoundOUT, no-one else would know how to use the music technology. But fortunately, through the Community Employment Scheme in the Togher Music Project, "there's a fantastic facilitator called Graham McCarthy".

Graham works with student Cillian McSweeney, who has cerebral palsy. "Cillian has very limited movement and no speech. He's a fantastic songwriter and writes his own lyrics."

"What's been really great about the SoundOUT project is that Cillian is now starting to write in a collaborative way with other members of the Togher Music Project."

The concert, which promises surprise guests, is for everyone, says Grainne. "The idea is to bring musicians, from all abilities, together. Evelyn Grant will be the MC."

To reserve tickets for tonight's concert, email: artsofficer@cit.ie



Press from Mish Mash

CULTURE CLUB
An 80s themed club night for everyone

Includes UK band
The Fish Police

An Arts and Disability
Network Cork project.

Friday 16th November City Limits Comedy Club and Nightclub, Cork

Photograph by Pau Ros

Friday 16th November

Doors open 7pm - Ends Midnight

City Limits Comedy Club and Nightclub, Cork

€9 in advance and €10 on the door

Box office: The Everyman 021 450 1673

The Everyman, 15 MacCurtain Street, Cork

www.everymanpalace.com

The theatre will accept cheque payments for group bookings – please call their box office to arrange.

*Internet transactions are subject to a handling charge.

Join us at **CULTURE CLUB**,
an event with an 80's retro
feel as well as your favourite
music from the 90s and
noughties from DJ Masters,
DJ Bob, DJ Nailer and DJ
Bog and more.

Seen recently performing at the
Paralympics pre-show, three-piece
band The Fish Police are coming to
Cork, with a strong 70s punk attitude
with a hip hop swagger and a dash of
pop. They will be joined by local Cork
musicians including Soundout member
Cillian McSweeney & band.

Wheelchair accessible

Find us on
facebook



Appendix D- Written Feedback from Christine Haughey

Grainne - Please introduce yourself and your musical experiences to date?

Christine - My name is Christine Haughey and I'm a member of Mish Mash.

Grainne - Describe your role/involvement in SoundOUT to date?

Christine - I am included in a band and have my own role to play. In Mish Mash I use Soundbeam. I learnt to use it with Gráinne. She taught me when to start and stop with the music. I'm included in the band and have my own role to play. I never had that before.

Grainne - How important is music in your life?

Christine - I think music is very important in my life. Music is a way for me to relax and to be in my own space throughout the day. Being involved in the music made it even more important and more inclusive for me.

Grainne- Has being involved in the SoundOUT Music Technology band had an impact on you?

Christine - Personally: I personally think that SoundOUT has made a huge difference in my life. For me it was the first push to get out and be independent from home as I had to travel [get a taxi] to get to it. It was a great confidence boost to be included in a band that uses inclusive technology and performing in front of a crowd, there is nothing like it.

Socially: It was great to make new friends to have a band to play with every week and of course the times where we went to the pub are among my favourite. I really felt part of a team and a real musician in the band.

Musically: SoundOUT has opened my eyes to inclusive music technology. - It just feels brilliant, especially in front of a crowd when we're rocking out. Now I know I can perform, I couldn't before. The experiences I've had are brilliant. The Highlight for me was performing to a full house in Skiberreen.

Grainne - What is your experience of using the Soundbeam / iPad technology to play music with the band?

Christine - I loved using it and thought it was very easy to play.

Grainne - What does it feel like when you are performing with Soundbeam/iPad?

Christine - It just feels brilliant, especially in front of a crowd when we're rocking out.

Grainne - If you were to design your ideal musical instrument what would it do and what would it look like?

Christine - It would be like the drums and it would look them too but instead of hitting the drums maybe use technology to use them instead.

Grainne - What are your musical ambitions for the future?

Christine - I will definitely stick with my music, get in to new bands and try out new instruments.

Grainne - What has been the highlight of your involvement with SoundOUT to date?

Christine - Performing live to a full house

Grainne - What do you feel have been most important factors that have made SoundOUT music technology band project a success to date?

Christine - It was incredibly inclusive, I really felt a part of the team and a real musician within the band.

Grainne - What do you feel have been the biggest challenges to date for you personally.

Christine - At first learning how to play the Soundbeam was a challenge, but I overcame it. I'm really good now

Grainne - If we were to redesign the project what would it involve?

Christine - If they were out there maybe new instruments but everything else was really cool and I like it just the way it is!

Appendix E – Parental Consent Form for Inclusive Band Research



Parental Consent form for Inclusive Band Project

Purpose of Study:

This research focuses on the use of Digital Musical Instruments for music making and learning practices in Ireland. It hopes to reveal the experiences of young people using Digital Musical Instruments to access meaningful music making and learning. It is primarily focused the experiences of young people with physical disabilities. This research is part of a PhD, which I am undertaking at University College Cork, School of Music and Theatre.

What will the study involve?

- This study will involve sets observations of young people as they engage in active music making and learning using Digital Musical Instruments within various contexts.
- Focus group interviews with young people within School of the Divine Child and Terence MacSwiney.
- Semi-structured interviews with band members and staff will take place after observations.

All of this will be recorded using a combination of video, audio and photographs.

Why have you been asked to participate in this study?

You have been asked to participate in this study because your child is interested in being involved in an inclusive band project that uses Digital Musical Instruments for music making and learning.

Do or your child have to take part?

No – you or your child do not have to take part in this research. Participation is voluntary. If you wish to participate, you must sign a consent form. After agreeing to participate, you will still have the option of withdrawing before the research commences or discontinuing after data collection has started.

Will your participation in the study be kept confidential?

Yes. If you wish, I will ensure that no clues to your identity appear in the thesis or any other publication emanating from the research. Any extracts from what you say that are quoted will be entirely anonymous.

What will happen to the information, which you give?

It is proposed to video record the interviews. All video recorded data (and any transcripts obtained from these recordings) will be labeled/coded in such a way that it will not be possible to identify any individual research participants. The data will be kept confidential for the duration of the study. On completion of the thesis, they will be retained for a further six years in a locked cabinet in the School of Music and Theatre, University College Cork. After this period, they will be destroyed.

What will happen to the results?

The results will be presented in the thesis and at various conferences. They will be seen by my research supervisor, a second marker and the external examiner. The thesis will be available to read by others in the university libraries. The study may also be published in a research journal.

What are the possible disadvantages of taking part?

I don't envisage any negative consequences for you in taking part.

What if there is a problem?

At the end of the interview, I will discuss with you how you found the experience and if you are satisfied with the research. If you subsequently feel distressed, you should contact the researcher.

Who has reviewed this study?

This study has been reviewed and approved by the ethical committee at University College Cork.

Any further queries?

If you need any further information or if you subsequently have any outstanding issues please contact me or my research supervisor at the following contact details:

Gráinne McHale	Dr. Mel Mercier
PhD Student	Research Supervisor
Tel: 087 6721707	School of Music and Theatre
Email: grainnemchalemusic@gmail.com	University College Cork
	Tel: 021 – 4904535
	Email: m.mercier@ucc.ie

If you agree to participate in this study please sign the consent form overleaf.

Consent Form

I.....agree to participate in Gráinne McHale's research study on the use of Digital Musical Instruments for music making and learning in Ireland.

The purpose and nature of the study has been explained to me in writing.

I am participating voluntarily.

I give permission for my interview with Gráinne to be video/audio recorded

I understand that I can withdraw from the study, without repercussions, at any time, whether before it starts or while I am participating.

I understand that I can withdraw permission to use the data within two weeks of the interview, in which case the material will be deleted.

I understand that anonymity will be ensured in the write-up by disguising my identity.

I understand that disguised extracts from my interview may be quoted in the thesis and any subsequent publications if I give permission below:

(Please tick one box:)

I agree to quotation/publication of extracts from my interview

☐

I do not agree to quotation/publication of extracts from my interview

☐

Signed..... Date.....

Appendix F – Accessible Information Leaflet



Accessible Information Leaflet for SoundOUT Inclusive Band Project 2013

Purpose of Study:

This research to find out how young people feel about using Digital Musical Instruments to make and learn music. Digital Musical Instruments are instruments like Soundbeam, The Magic Flute and iPad technology. This study is part of Gráinne McHale's PhD (research college course) in the School of Music and Theatre at University College Cork.



What will the study involve?

- Gráinne will watch and take notes while young people make and learn music using Digital Musical Instruments, both in School of the Divine Child and in Terence MacSwiney.
- Gráinne will conduct focus group discussions with young people from School of the Divine Child School and Terence MacSwiney Secondary School.



- Grainne will conduct informal interviews with students, music tutors, classroom teachers and staff from School of the Divine Child and Terence MacSwiney will take place after observations.

All of this will be recorded using a combination of video, audio and photographs.



Why have you been asked to participate in this study?

You have been asked to participate in this study because you are interested in joining an inclusive band project that uses of Digital Musical Instruments to make and learn music.



Do you have to take part?

No – you do not have to take part in this research. Participation is completely voluntary. If you wish to participate, you must agree to this before Grainne starts researching by signing and/or agreeing to this form. After agreeing to participate, you still have the option to stop being involved in the research.



Will what you say during this research be kept confidential?

Yes. If you wish I will ensure that no names will appear in writing up of this research without permission. If requested anything you say will be entirely anonymous.



What will happen to the information you give?

I will video/audio record all interviews and focus groups. All videos and notes will be organized that it is not possible to know any of the students. All videos and notes will be kept confidential for the



project. When I finish my research, I will keep them in a locked cabinet in the School of Music and Theatre, University College Cork. They will be destroyed after 6 years.

What will happen to the results?

The results will be presented in the thesis (book) and at various events and conferences. They will be seen by my research supervisor, a second marker and the external examiner. The book will be available to read by others in the university libraries. The study may be published in a research journal.



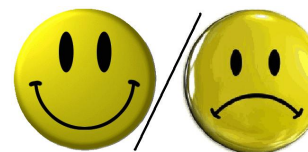
What are the possible disadvantages of taking part?

I don't believe there are any disadvantages of you taking part in this research.



What if there is a problem?

At the end of the interview, I will ask you how you felt the Interview went and if you are happy with the research. If you feel unhappy about the research after the interview is finished, you should contact to Gráinne directly.



Who has approved this study?

This study has been reviewed and approved by the ethical committee at University College Cork.



Any further questions?

If you need any further information or if you have any questions please contact me or my research supervisor at the following contact details:



Gráinne McHale PhD Student Tel: 087 6721707 Email: grainnemchalemusic@gmail.com	Dr. Mel Mercier Research Supervisor School of Music and Theatre University College Cork Tel: 021 – 4904535 Email: m.mercier@ucc.ie
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Appendix G – Accessible Consent form for Students.

Iagree to participate in Gráinne McHale’s research study on the use of interactive music technology as a tool for inclusive music making and learning in Ireland.

The purpose of the study has been explained to me in writing. The purpose of the study has been explained to me in school by Grainne.



I am participating voluntarily.

I give permission for my interview with Gráinne to be video-recorded.



I understand that I can stop being involved in the study at any time

I understand that I can stop permission to use the interview. If this is the case the material will be deleted.



I understand that all interviews will be confidential and my name will not be used during the write up of this study.



I understand that anonymous extracts from my interview may be quoted in the thesis and any subsequent publications if I give permission below:



(Please tick one box:)

I agree to allow Gráinne to write up what I say in an interview

☐

I do not allow Gráinne to write up what I say/write in an interview

☐

Signed.....

Date.....

Parents form:

I agree to allow Gráinne to write up what my child says in an interview

☐

I do not allow Gráinne to write up what my child says in an interview

☐

Signed.....

Date.....

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